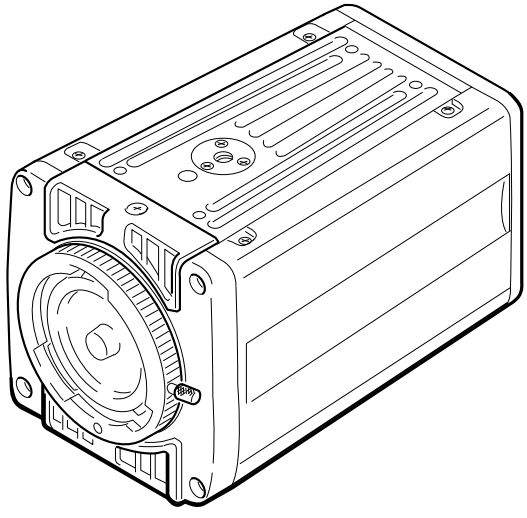
SONY

HD 3CCD COLOR VIDEO CAMERA

DXC-H10

SERVICE MANUAL



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SECTION 1
OPERATING INSTRUCTIONS

This section is extracted from operation manual.

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EN English

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Symbol on the unit

Symbol	Location	This symbol indicates
⚠	Side panel	This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
⎓	Rear panel	This symbol indicates that a direct current (DC) is input.

Chapter 1

Overview

Features

The DXC-H10 is a compact and lightweight HD (High-Definition) color video camera that provides high-definition video images, and has a wide variety of applications.

High-quality images

The DXC-H10 produces high-quality images thanks to its 2/3-inch, three-chip CCD[1)] containing some 2,000,000 effective picture elements (pixels). The camera has the following features that ensure high image quality:

- High horizontal resolution:1000 TV lines
- High sensitivity (defined as minimum required illumination): 2,000 lux at F8
- High signal-to-noise ratio: 50 dB
- Low smear characteristic

Compact and lightweight

The camera is compact (95 × 95 × 160 mm) and light (approx. 1.2 kg), allowing easy installation into places where space is a problem. Connection to the camera adaptor by cable (range: up to 100 m) facilitates installation away from the control room.
The applications include:

- As a camera for a microscope
- As a roof-top weather-monitoring camera
- As a permanent fixture in museums, concert halls, laboratories, etc.
- Use in video display systems for presentations at conferences
- Installation into a crane used for photographing in a studio

1) CCD: Charge-Coupled Device

Features

Wide range of electronic shutter modes

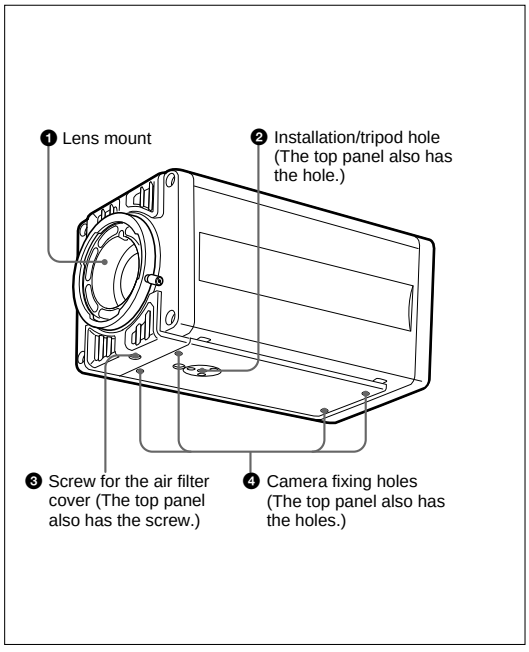
A variety of shutter modes that utilize the CCD are incorporated. (The captions in parentheses are menu names.)

- **Electronic shutter (STEP)**
  Selects from ten shutter speeds, ranging from 1/100 to 1/100,000 seconds.
- **Long-exposure shutter mode (MANU)** [1)]
  Allows you to open the shutter from two frames to a maximum of 256 frames (equivalent of 8.5 seconds) to build up an electric charge on the CCD. Under poor lighting conditions images can be shot with adequate brightness. This is essential in the fields of science and research.
- **Clear scanning mode (MANU)**
  Sets the shutter speed in units of 1H (horizontal scanning time) up to 560H. Enables you to reduce noise when shooting computer screen displays.
- **CCD IRIS™** [2)] **(CCD-IRIS)**
  Automatically adjusts exposure when using a manual-iris lens.
- **Restart/reset function (R. R)** [1)]
  Allows you to accurately shoot the object from a fixed location. You can also modify the charge time for extended exposure according to the timing of an external trigger signal.
- **External trigger shutter (EXT. TRIG)** [1)]
  Lets you capture the object the instant an external trigger signal is input. This shutter mode allows you to shoot fast-moving objects accurately from a fixed location. The shutter speed can be set in units of 1H up to 560H.
- **Long-term reset mode (LTR)** [1)]
  Accumulates the video signals while the input level of an external trigger level is low and outputs the image the instant the level becomes high. This mode allows you to shoot fast-moving objects accurately from a fixed location.

1) To use the functions, you have to connect an external frame memory, etc.
2) CCD IRIS™ is a trademark of Sony Corporation.

Location and Functions of Parts and Controls

Front Panel/Top Panel/Bottom Panel


❶ Lens mount
❷ Installation/tripod hole (The top panel also has the hole.)
❸ Screw for the air filter cover (The top panel also has the screw.)
❹ Camera fixing holes (The top panel also has the holes.)

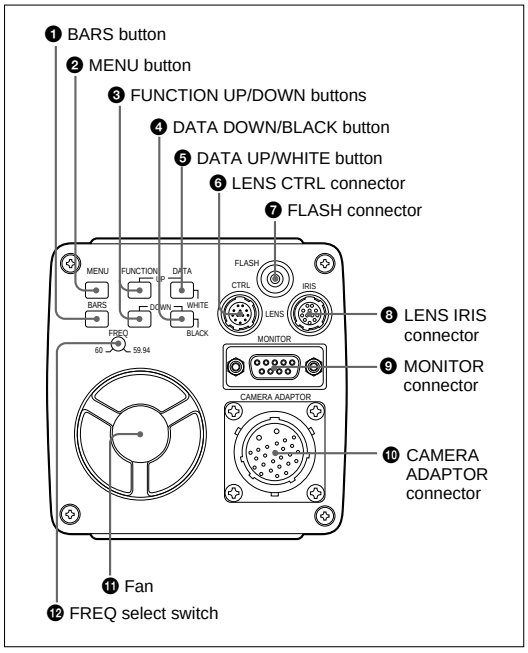
❶ Lens Mount
Attach a zoom lens or micropscope adaptor.

❷ Installation/tripod hole (top/bottom)
Use this hole when attaching the camera to a wall, ceiling or tripod (screw: 1/4”, 20 UNC).

❸ Screw for the air filter cover (top/bottom)
Loosen the screws to remove the cover when cleaning an air filter.

❹ Camera fixing holes (top/bottom)
Use these holes (M3, depth of the hole: 5 mm) to attach the camera to a wall or ceiling when you do not use the installation/tripod hole ❷.

Rear Panel



❶ BARS (color bars output) button
Pressing this button outputs the color bar signals. Press again to revert to video signal output.
For monitor adjustment, contact your authorized Sony dealer.

❷ MENU button
Pressing this button makes the operational setting menu display on the monitor. Each press changes the menu page.
For menu operation, see “Operation through Menus” on page 14.

❸ FUNCTION UP/DOWN (cursor up/down) buttons
UP button: moves the menu cursor upward.
DOWN button: moves the menu cursor downward.

❹ DATA DOWN/BLACK (setting value reduction/ black balance) button
With the menu displayed: decreases the setting value or selects the item on the left.
With the menu hidden: activates the automatic black balance adjustment.

❺ DATA UP/WHITE (setting value increase/white balance adjustment) button

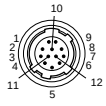
With the menu displayed: increases the setting value or selects the item on the right.

With the menu hidden: activates the automatic white balance adjustment. (only when WHT. BAL in the PAGE 2/3 menu is set to AWB)

❻ LENS CTRL (lens control signal) connector (12-pin, male)

Connects to a lens control cable.

Pin assignment



Pin No.	Signal	Pin No.	Signal
1	Focus mode output [1]	7	—
2	Zoom mode output [1]	8	Focus control output
3	—	9	Zoom control output
4	—	10	Iris mode output [1]
5	Iris control output	11	COM+V input (+7.5 V)
6	—	12	COM–V input (+2.5 V)

❼ FLASH connector

Connect to a flash cable. You can shoot the image at the time of the flash if you use an external frame memory.

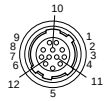
Pin assignment

Pin No.	Signal
1	Flash
2	GND

❽ LENS IRIS connector (12-pin, female)

Connect to a lens iris cable.

Pin assignment



Pin No.	Signal	Pin No.	Signal
1	—	7	—
2	—	8	—
3	GND	9	—
4	ENF auto output	10	—
5	Iris control output	11	Reserve
6	Lens power output	12	Reserve

1) Pins 1, 2 and 10 are connected to pin 11 inside the camera.

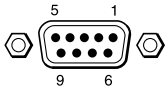
Location and Functions of Parts and Controls

❾ MONITOR connector (D-sub 9-pin)

Outputs GBR signals or YP_BP_R signals and their respective sync signals.

Use a CCXC-9DBS cable for the connections.

Pin assignment



Pin No.	Signal	Pin No.	Signal
1	GND	6	HD output
2	GND	7	VD/SYNC output
3	R/P_R output	8	GND
4	G/Y output	9	Reserve*
5	B/P_B output		

* Used to control menus on external equipment

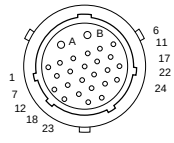
Output signals from the BNC connectors on the CCXC-9DBS cable

BNC connector	Signal
R	R/P_R output
G	Y/G output
B	B/P_B output
VIDEO	HD output
SYNC	VD/SYNC output

❿ CAMERA ADAPTOR connector (26-pin)

Connects to the CMA-H10 camera adaptor (not supplied).

Pin assignment



Pin No.	Signal	Pin No.	Signal
A	Power input	12	Trigger/ WE pulse output
B	GND	13	Control
1	TRIG input	14	SENS (+)
2	GND	15	—
3	GND	16	GND
4	G/Y output	17	SENS (–)
5	R/P_R output	18	HD input/output
6	GND	19	GND
7	B/P_B output	20	—
8	GND	21	VD/SYNC input/output
9	—	22	VSTBY/WE pulse output
10	—	23	—
11	—	24	—

⓫ Fan

⓬ FREQ (scanning frequency) select switch
Selects the scanning frequency, 60 Hz or 59.94 Hz, depending on the specifications of your system.

Chapter 2

Operation

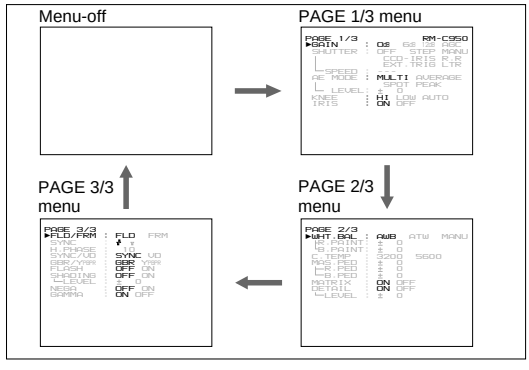
Adjusting and Setting with Menus

Camera operational settings can be changed through simple adjustment of the settings on the on-screen menus. Settings can be adjusted to get the best possible results for the given shooting conditions or to enhance the image with special effects.
The adjusted settings are stored in the memory and remain even after the power of the camera is turned off.

Menu Configuration

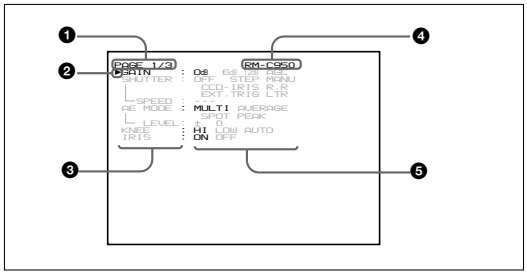
There are three menu pages.
To display the menu, press the MENU button on the rear panel.
Each time you press the MENU button, the menu page changes as illustrated on the right.

To change the screen from the menu-off to the PAGE 1/3 menu, hold down the MENU button for more than a second.



About on-screen menus

This section explains how to read the on-screen menu before starting menu operation.



❶ Menu page
Displays the currently selected menu page.
It changes each time you press the MENU button.

❷ Cursor
Selects a setting item.
Move the cursor up or down using the FUNCTION UP/DOWN buttons.

❸ Setting items
The currently selected item is highlighted.
Select the item with the FUNCTION UP/DOWN buttons.

❹ Remote control indication
When the CAMERA/REMOTE switch on the RM-C950 remote control unit (not supplied) is set to REMOTE, the indication is displayed.
When it is displayed, the setting items, GAIN, IRIS, DETAIL and MAS. PED, can be adjusted with the controls on the remote control unit, although the items on the menu are not highlighted.

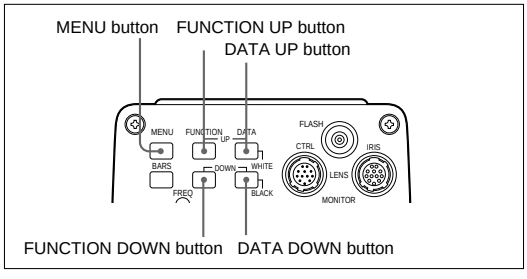
❺ Set values
The currently set values are highlighted.
Change the values using the DATA UP/DOWN buttons.

Adjusting and Setting with Menus

Operation through Menus

Menu operation buttons

Operate the menu with buttons on the rear panel.

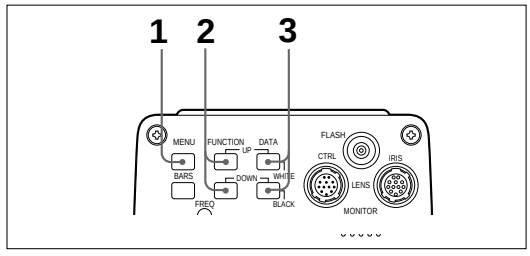


The following table shows the functions of the buttons.

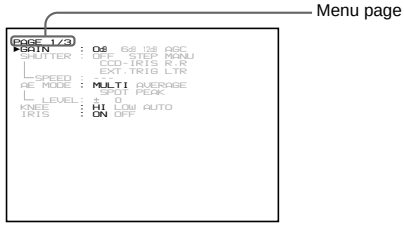
Button	Function
MENU	Displays the menu. Each press of the button changes the menu page.
FUNCTION UP	Moves the cursor upward.
FUNCTION DOWN	Moves the cursor downward.
DATA UP	Increases the value. Selects the item on the right.
DATA DOWN	Decreases the value. Selects the item on the left.

Menu operation procedure

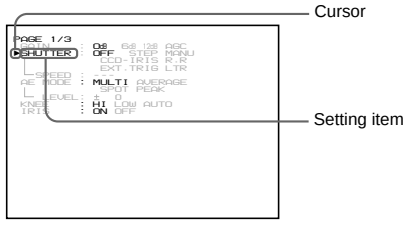
To change the settings on the menu, proceed as follows.



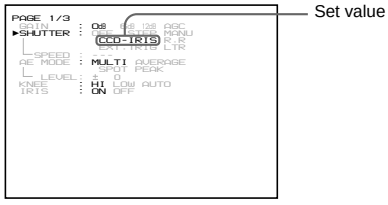
1 Press the MENU button to select the desired menu page.



2 Move the cursor to the item to be set by pressing the FUNCTION UP or DOWN button.
The cursor is beside the item that was selected last in any menu page.



3 Change the value by pressing the DATA UP or DOWN button.
Holding down the button changes the value quickly.



To reset to the initial set value

Select the item to be reset, then press the DATA UP and DOWN buttons simultaneously.
For the initial set value on each item, see "Initial Setting List" on page 28.

To return to the regular monitor screen

Press the MENU button repeatedly until the menu-off screen appears.

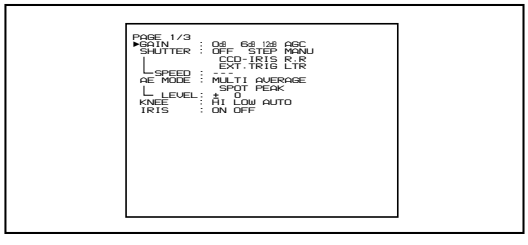
Note

If you set SHUTTER to R. R, EXT. TRIG or LTR on the PAGE 1/3 menu and turn off the camera, the picture will not be displayed on the monitor screen when it is turned on again. This indicates that the camera is waiting for an external trigger signal input and is not a malfunction of the camera. Check the setting of SHUTTER in cases where no picture is displayed.

Adjusting and Setting with Menus

Function of Menus

PAGE 1/3 menu



Setting items on PAGE 1/3 menu

Menu item	Function	Ref. page
GAIN	Adjusts video gain.	16
SHUTTER	Sets the modes for the electronic shutter.	16
SPEED	Sets the shutter speed.	16
AE MODE	Sets the method of detecting luminance level for auto exposure adjustment.	20
LEVEL	Adjusts the detection level for the selected AE mode.	20
KNEE	Sets the knee point.	20
IRIS	Activates or deactivates the auto iris function.	20

GAIN

Adjusts the video gain.

Selection	Function
0 dB	Normally, set to this position.
6 dB	Increases the gain by 6 dB.
12 dB	Increases the gain by 12 dB.
AGC	Automatic gain control. Automatically adjusts the gain according to the brightness of the object to be shot. This function is useful for shooting under changing lighting conditions.

SHUTTER

Selects the electronic shutter modes.
Select the desired mode, then select SPEED to set the shutter speed.

Selection	Function
OFF	Any electronic shutter mode does not function.The SPEED setting indicates "- - -".
STEP	Sets the shutter speed to any of ten steps: 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/20000, 1/40000 or 1/100000 seconds.

Selection	Function
MANU	Use for fine adjustment of the video output level. You can set the SPEED value in units of 1FRM (frame), ranging from 2 to 256FRM, in long exposure mode (low-speed mode), and in units of 1H (horizontal scanning time), ranging from 1 to 560H in clear scan mode (high-speed mode). **Long exposure mode** You can set the SPEED value in units of 1 frame. For example, if you set to 50 frames (about 1.7 seconds), the video signal produced during this set time is output in the form of one complete frame at intervals of about 1.7 seconds. These pictures, which contain 50 frame of video information, are much brighter than normal one-frame images. This mode is useful for shooting a poorly illuminated object in a dark place. The long exposure mode works only when in the frame accumulation mode. Set FLD/FRM in the PAGE 3/3 menu to FRM.

Selection	Function
MANU (Cont.)	**To set the shutter speed** **1** Display OFF by pressing the DATA UP and DOWN buttons together. **2** Select the SPEED value by pressing the DATA DOWN button. Each time you press the button, the value changes in units of 1 frame in the range from 2FRM through 256FRM. **To convert the value into the shutter speed** **Example:** When the value is set to 5FRM 5 × 1/30 = 0.1666 seconds **Notes** • In long exposure mode, AUTO IRIS does not function. • If you try to set the SPEED value when the FLD/FRM mode in the PAGE 3/3 menu is set to FLD, the error message “SPEED: xx FRM <FLD>” appears on the screen.

(Continued)

Adjusting and Setting with Menus

Selection	Function
MANU (Cont.)	**Clear scan mode** You can set the SPEED value in units of 1H (horizontal scanning time: 29.63 µs). For example, use of this mode reduces noise (horizontal patterns) when shooting a computer screen display. **To set the shutter speed** **1** Display OFF by pressing the DATA UP and DOWN buttons together. **2** Select the SPEED value by pressing the DATA UP button while observing the noise on the monitor screen so that you can obtain the image with minimum noise. Each time you press the button, the value changes in units of 1H in the range from 560H through 1H. **To convert the value into the shutter speed** **Example:** When the value is set to 250H 250 × 29.63 µs (1H) + 18.42 µs (constant) = 7425.92 µs = Approx. 0.0074 seconds

Selection	Function
CCD-IRIS	Automatically adjusts the luminance level for optimum output level. The shutter speed changes in the range from 1/60 to 1/10000. The SPEED display indicates “- - -”. For example, this function is useful for microscope adaptor applications. When shooting with a microscope not equipped with the auto-iris lens, the luminance level that is just right for the human eye is often too bright for the video camera. When CCD-IRIS is selected, the electronic shutter automatically decreases excessive incident light to an appropriate level for the video camera. This function is also useful for cutting out excessive incident light that is not cut out by the auto-iris lens in scenes containing very bright patches (such as snow, or sea water reflecting sunlight). You can use CCD-IRIS in combination with AGC and/or AUTO IRIS control.

Selection	Function
R. R (Restart/ reset)	Controls the image pickup start point and output timing with an external trigger signal, which allows you to accurately capture the object to be shot from a fixed location. You can also modify the charge time for long-term exposure. This mode can be used with other SHUTTER modes if the SPEED value is set in the range from 1H to 560H, but normally set SPEED to OFF.
EXT. TRIG (External trigger)	With an external trigger signal a field image and the WE pulse are output. When you use the camera together with an external frame memory, you can capture a field still image the instant an external trigger signal is input. This is useful for shooting a fast-moving object accurately from a fixed location. You can set the SPEED value in units of 1H (horizontal scanning time) in the range from 1H to 560H.

Selection	Function
LTR (Long-Term Reset)	With an external trigger signal a field image and the WE pulse are output. When you use the camera together with an external frame memory, you can capture a field still image the instant an external trigger signal is input. This mode is also useful for shooting a fast-moving object accurately from a fixed location. The shutter speed is determined according to the pulse width of an external trigger signal. The SPEED display indicates "- - -".

Note

The R. R, EXT. TRIG. and LTR modes function when the menu is turned off.
The camera does not accept the external trigger signal while any menu is displayed.

Adjusting and Setting with Menus

AE MODE (Auto Exposure mode)

Selects the appropriate method to detect the luminance level on a monitor screen in auto exposure mode.
Select the desired mode, then select LEVEL and set the auto exposure focusing level within the range from –127 to +127.

Selection	Function
MULTI	Divides the screen into 9 sections and adjusts auto exposure according to the luminance level in each section. Normally set to this position.
AVERAGE	Adjusts auto exposure by detecting the average luminance level of the whole screen. Select to see the whole screen.
SPOT	Adjusts auto exposure by detecting the center section only in 9-divided screen. Select to shoot very small objects.
PEAK	Adjusts auto exposure by detecting the part with the highest luminance level. Select to see the part with a bright object in the screen.

KNEE (Knee point)

Sets the knee point according to the incident luminance level.

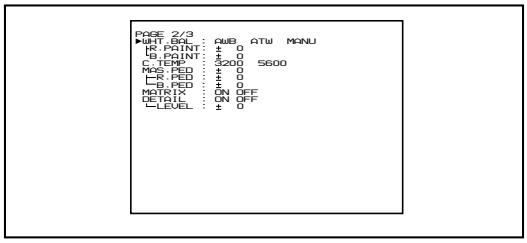
Selection	Function
HI	Sets the knee point at the 100% luminance level.
LOW	Sets the knee point at the 90% luminance level.
AUTO	Automatically adjusts the knee point ranging from 80% to 100% according to the contrast of the image.

IRIS

Selects to activate or deactivate the iris mode.

Selection	Function
ON	The auto iris mode functions. Select when using the auto iris lens.
OFF	The auto iris mode does not function. Select when using the optical lens without the auto iris function.

PAGE 2/3 menu



Setting items on PAGE 2/3 menu

Menu item	Contents of setting	Ref. page
WHT. BAL	Selects the white balance modes.	21
R./B. PAINT	Finely adjusts the white balance (AWB, ATW).	21
R./B. GAIN	Finely adjusts the manual white balance.	22
C. TEMP	Selects the color temperature according to the lighting conditions.	22
MAS. PED	Sets the pedestal level of the output signal.	22
R./B. PED	Finely adjusts the pedestal level.	22
MATRIX	Enables or disables processing of a color matrix.	23
DETAIL	Enables or disables adjustment of the sharpness of the image outline.	23
LEVEL	Adjusts the sharpness of the image outline.	23

WHT. BAL (white balance)

Selects the white balance modes.

Selection	Function
AWB	Use for automatic adjustment of the white balance (auto white balance). When this item is selected, R. PAINT and B. PAINT are highlighted. Use these items for fine adjustment. Adjust them while observing the monitor screen. **R. PAINT:** Finely adjusts the red in the range from –127 to +127. **B. PAINT:** Finely adjusts the blue in the range from –127 to +127. *For details, see "Adjusting the White Balance" on page 31.*
ATW	Activates auto-tracing white balance. This mode is suitable for shooting when the light source changes. The white balance is automatically adjusted as the color temperature changes. When this item is selected, R. PAINT and B. PAINT are highlighted. Use these items for fine adjustment. Adjust them while observing the monitor screen. The adjusted values are stored in other memory than AWB values. **R. PAINT:** Finely adjusts the red in the range from –127 to +127. **B. PAINT:** Finely adjusts the blue in the range from –127 to +127.

Adjusting and Setting with Menus

Selection	Function
MANU	Use for manual adjustment of white balance. When this item is selected, R. GAIN and B. GAIN are highlighted. Adjust them while observing the monitor screen. **R. GAIN:** Finely adjusts the red gain in the range from –127 to +127. **B. GAIN:** Finely adjusts the blue gain in the range from –127 to +127.

C. TEMP (color temperature)

Selects the color temperature according to the lighting conditions.

Selection	Lighting condition
3200	Use for indoor shooting. (Color temperature: 3200K)
5600	Use for outdoor shooting. (Color temperature: 5600K)

Note

When WHT. BAL is set to AWB, the items in C.TEMP cannot be selected.

MAS. PED (master pedestal)

The pedestal levels of the G, B and R output signals can be adjusted simultaneously. Normally set to ±0.
Adjusts the darkness level of the black part of the image. Use this function to bring out details in heavily shaded areas. The adjustable range is from –127 to +127.
Use of a waveform monitor allows easier adjustment.

Adjusting direction	Effect
+	The whole image becomes whiter.
–	The whole image becomes blacker.

When MAS. PED is selected, R. PED and B. PED are highlighted. Use them to finely adjust the pedestal level of each color. Adjust these items while observing the monitor screen.

Selection	Function
R. PED	Finely adjusts the red in the range from –127 to +127.
B. PED	Finely adjusts the blue in the range from –127 to +127.

http://getMANUAL.com

MATRIX (linear matrix)

Processes an image with a color matrix to produce natural colors.

Selection	Function
ON	Corrects the color to produce natural color.
OFF	Color correction does not function. Use when you want to process the image.

DETAIL

Enables or disables adjustment of the sharpness of the image outlines.

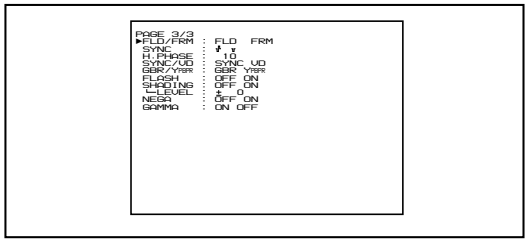
Selection	Function
ON	Enables adjustment of the sharpness of the image outline.
OFF	Disables adjustment of the sharpness of the image outline.

When you set DETAIL to ON, LEVEL is highlighted. Adjust the sharpness of the image outline in the range from –127 to +127 in accordance with your shooting purpose and your taste.

Adjusting direction	Effect
+	Sharper with more detail on the image outline.
–	Softer with less detail on the image outline.

Adjusting and Setting with Menus

PAGE 3/3 menu



Setting items on PAGE 3/3 menu

Item	Function	Ref. page
FLD/FRM	Selects the CCD read-out mode.	24
SYNC	Selects the sync signal.	24
H.PHASE	Adjusts the horizontal phase when using the camera with the external sync signal.	25
SYNC/VD	Switches the signal output from the CAMERA ADAPTOR and MONITOR connectors.	25
GBR/YP_BP_R	Switches the video output signal.	25
FLASH	Switches the FLASH connector on/off.	25
SHADING	Eliminates color at the top and bottom of the screen.	27
LEVEL	Adjusts the SHADING level.	27
NEGA	Reverses the output image to negative.	27
GAMMA	Enables gamma compensation.	27

FLD/FRM (field/frame)

Selects the CCD read-out mode.

Selection	Function
FLD	Accumulates charges in field units. Use to shoot a moving object.
FRM	Accumulates charges in frame units. Provides the image with the highest possible vertical resolution. Use to shoot a still object.

SYNC (synchronization)

Selects the sync signal to be used.

Selection	Function
⎍	Uses tri-level sync signal. Normally set to this position.
⎍	Uses bi-level sync signal. Select when you output images to a printer, etc. that does not accept the tri-level sync signal.

Note

If you use long exposure mode by setting SHUTTER to MANU, set FLD/FRM to FRM.

H. PHASE (horizontal phase)

Adjusts the horizontal phase when you use the external sync signal. The initial setting is 10. Adjustable range is from 0 to 255.

SYNC/VD

Switches the signal[1)] output from the Pin 21 on the CAMERA ADAPTOR connector (26-pin) and from the Pin 7 on the MONITOR connector (D-sub 9-pin).

Selection	Function
SYNC	Outputs the sync signal.
VD	Outputs the VD signal.

GBR/YPBPR

Switches the video signal output from the CAMERA ADAPTOR connector (26-pin) and the MONITOR connector (D-sub 9-pin).

Selection	Function
GBR	Outputs the GBR signal.
YP_BP_R	Outputs the YP_BP_R signal.

Note

If the monitor is equipped with the signal selector, select the same signal as the GBR/YP_BP_R setting on the selector.

FLASH

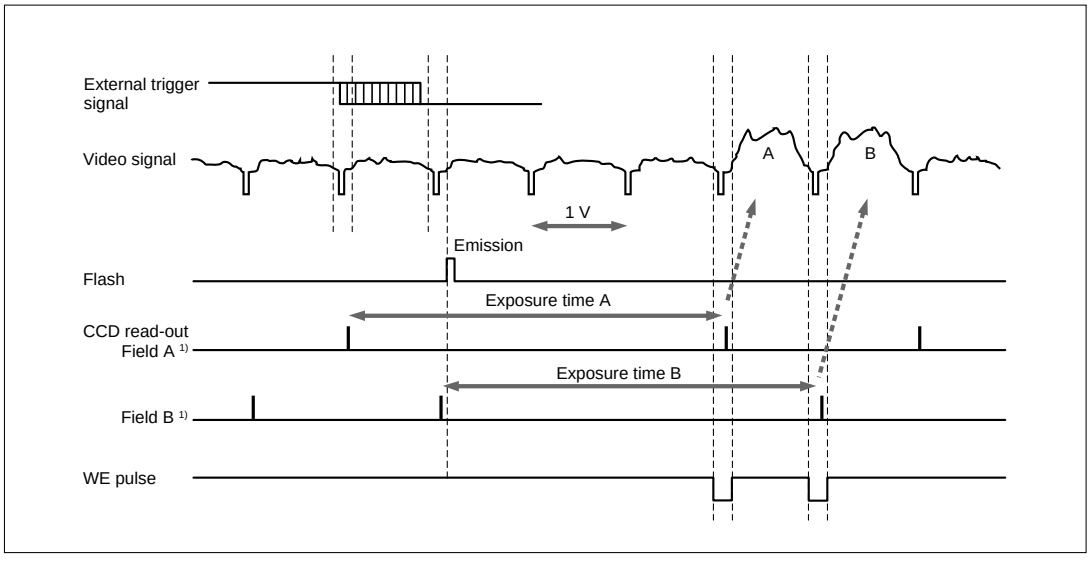
Sets when you use a flash connected to the FLASH connector on the rear panel.

Selection	Function
OFF	Select this setting when using the camera without a flash.
ON	Select this setting when you connect a flash to the FLASH connector, and use an external frame memory, etc. Synchronized with the input of an external trigger signal, a flash is emitted and the WE pulse is output. Use of the WE pulse with an external frame memory allows you to capture full-frame still images of an HD signal. To select this setting, set FLD/FRM in the PAGE 3/3 menu to FRM. *For details, see the timing chart in flash emission on page 26.*

1) You can switch the input and output with the IN/OUT select switch on the rear panel of the CMA-H10 camera adaptor.

Adjusting and Setting with Menus

Timing chart in flash emission



1) When an external trigger signal is input during the period of field 1 scanning, the field A is equivalent to field 1, and the field B to field 2. The CCD reads out the field 1, then field 2 to output the video signals A and B. When an external trigger signal is input during the period of field 2 scanning, the field A is equivalent to field 2, and the field B to field 1. The CCD reads out the field 2 first, then the field 1 to output the video signals A and B.

SHADING
Eliminates green or magenta color which may appear at the top or bottom of the screen, when the camera is used with an optical instrument.

Selection	Function
OFF	Color elimination does not function.
ON	If green or magenta color appears at the top or bottom of the screen when the camera is attached to a microscope, etc., select this setting.

When SHADING is set to ON, LEVEL is highlighted. Adjust while observing the screen so that the color is eliminated. Adjustable range is from –127 to +127.

Adjusting direction	Effect
+	Magenta at the top and green at the bottom will be eliminated.
–	Green at the top and magenta at the bottom will be eliminated.

NEGA
Reverses the output image to negative/positive.

Selection	Function
OFF	Outputs the image normally.
ON	Outputs the image reversed to negative.

GAMMA
Compensates gamma.

Selection	Function
ON	Normally select this setting. Compensates the reproduction characteristics of a cathode-ray tube of a monitor to produce natural-tone image.
OFF	Outputs the video signal linearity without gamma compensation. Use this setting when you want to produce images for image processing or image analysis.

Adjusting and Setting with Menus

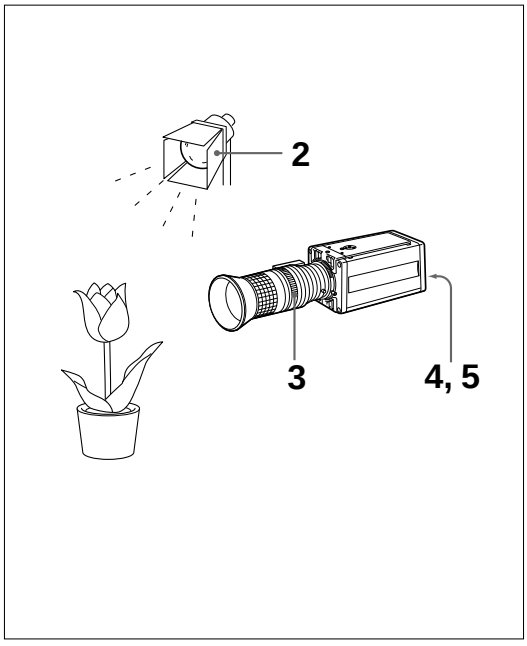
Initial Setting List

Menu page	Item	Initial setting value
PAGE 1/3	GAIN	0 dB
	SHUTTER	OFF
	SPEED [1]	STEP: 1/100 MANU: OFF R. R: OFF EXT. TRIG: 560H
	AE MODE	MULTI LEVEL: ±0
	KNEE	HI
	IRIS	ON
PAGE 2/3	WHT. BAL	AWB R. PAINT: ±0 B. PAINT: ±0 R. GAIN: ±0 G. GAIN: ±0
	C. TEMP	3200 [2]
PAGE 2/3 (Cont.)	MAS. PED	±0 R. PED: ±0 B. PED: ±0
	MATRIX	ON
	DETAIL	ON LEVEL: ±0
PAGE 3/3	FLD/FRM	FLD
	SYNC	⎍
	H. PHASE	10
	SYNC/VD	SYNC
	GBR/YP_BP_R	GBR
	FLASH	OFF
	SHADING	OFF LEVEL: ±0
	NEGA	OFF
	GAMMA	ON

1) "---" is displayed when SHUTTER is set to OFF, CCD-IRIS or LTR.
2) The setting cannot be selected if WHT. BAL is set to AWB.

Shooting

Basic Shooting Procedure



1 Turn on the power of the camera and all connected devices.

2 Illuminate the object with proper lighting.

3 Aim the camera at the object and adjust the iris, focus and zoom.

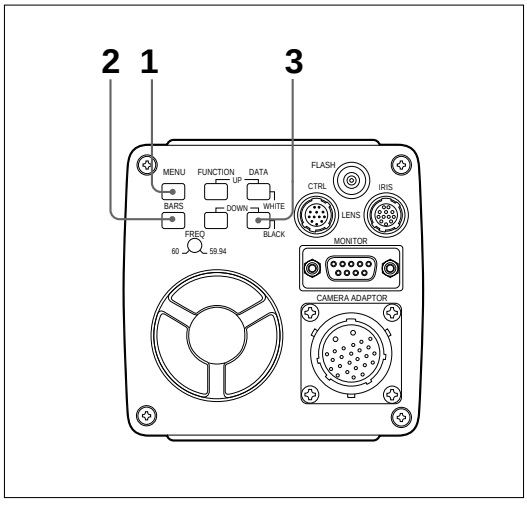
4 Adjust the white balance.
For details, see “Adjusting the White Balance” on page 31.

5 Adjust the settings as required.
For details, see “Adjusting and Setting with Menus” on page 12.

6 Start shooting.

Adjusting the Black Balance

Be sure to adjust the black balance when you use the camera for the first time, or after you have not used it for a long period of time, or if there is a sudden change in the temperature.



Operation procedure

1 If any menu page is displayed on the screen, press the MENU button to turn it off.

2 If a color bar signal is displayed on the screen, press the BARS button to turn it off.

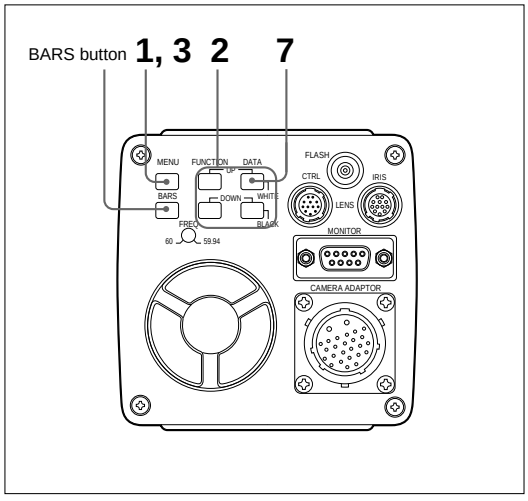
3 Press the BLACK button.
The lens iris control is automatically closed, and the black balance is adjusted. If you use a manual-iris lens, close the iris then press the BLACK button.
When the adjustment is completed, the massage “AUTO BLACK: OK” appears on the screen. The adjusted black level is stored in the memory and remains even after the power is turned off.

Black balance adjustment errors

If the black balance adjustment is not successful, an error message appears on the screen. If this happens, take necessary measures and perform steps 1 through 3 again.
For details, see “List of Messages” on page 52.

Adjusting the White Balance

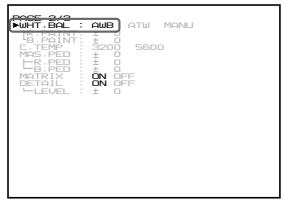
Each time the lighting conditions change, be sure to adjust the white balance so that optimum color reproduction is obtained.



Operation procedure

1 Press the MENU button repeatedly until the PAGE 2/3 menu appears on the screen.

2 Set WHT. BAL to AWB.



3 Press the MENU button twice to turn off the menu.

4 Display the camera image on the monitor screen.

Note

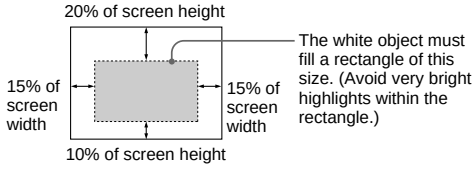
If a color bar signal is displayed on the screen, press the BAR button to turn it off.

5 Set the lens iris control as follows.
When using an auto-iris lens: Set to auto-iris control.
When using a manual-iris lens: Set to an appropriate iris opening value.

(Continued)

Shooting

6 Place a white object (white pattern, white cloth, etc.) in the same light as that falling on the object to be shot, then zoom in on the white object to fill the screen as follows.


20% of screen height
15% of screen width
15% of screen width
10% of screen height
The white object must fill a rectangle of this size. (Avoid very bright highlights within the rectangle.)

The white object can be a white wall near the object to be shot.

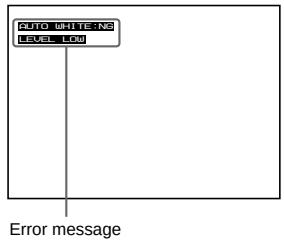
Notes

- Do not to include highly reflective objects in the picture.
- Always shoot the image under suitable lighting conditions.

7 Press the WHITE button.
The message “AUTO WHITE: OK” appears on the screen when the adjustment is done.
The adjusted white level is automatically stored in memory and remains even if the camera’s power is turned off.
To shoot under the same conditions, the stored white balance is recalled by setting WHT. BAL in the PAGE 2/3 menu to AWB.

White balance adjustment errors

If the auto white balance adjustment is not successful, an error message appears on the screen. If this happens, take the necessary measures and perform steps 1 through 7 again. *For more details, see “List of Messages” on page 52.*



Using the External Trigger

This camera, in addition to the mode of normal shooting of moving objects, features the special modes, R. R., EXT. TRIG and LTR. In these modes the camera outputs the image controlled by an external trigger signal without using its vertical sync signal. This allows you to capture a still image at your preferred timing with an external frame memory. The three modes differ in trigger pulse timing, delay time of the start of accumulation from the trigger signal, and the accumulation mode (frame or field mode). This section explains the features and operating procedures of the three modes.

Note

If you set SHUTTER to R. R., EXT. TRIG. or LTR, automatic white balance and automatic iris control do not function.

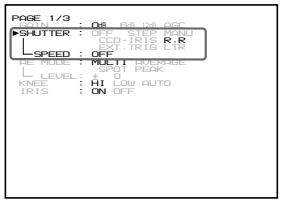
Shooting

R. R (restart/reset) mode

The R. R mode functions when the external HD (horizontal sync) and trigger signals are input. The timing of the two signals determines the field that the CCD reads out. Depending on the CCD accumulation mode and the trigger timing, you can use this mode in the four cases shown on page 35.
In this mode the start of accumulation of the video signals is about 1 ms behind the input of the trigger signal.

To use the R. R. mode, set the menu as follows:
For details on menu operation, see "Operation through Menus" on page 14.

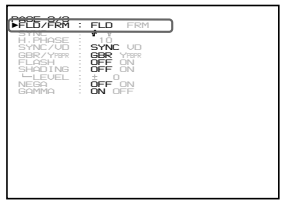
1 Set SHUTTER in the PAGE 1/3 menu to R. R.
The SPEED display is highlighted.



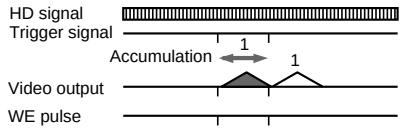
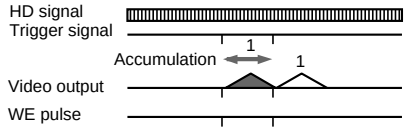
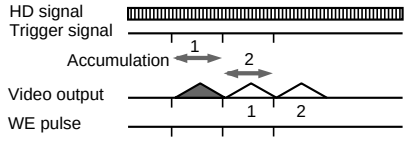
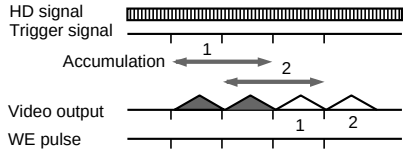
2 Move the cursor to SPEED with the FUNCTION DOWN button, and set SPEED to OFF by pressing the DATA UP or DOWN button.

3 Press the MENU button twice.
The PAGE 3/3 menu is displayed.

4 Set FLD/FRM to FLD or FRM.



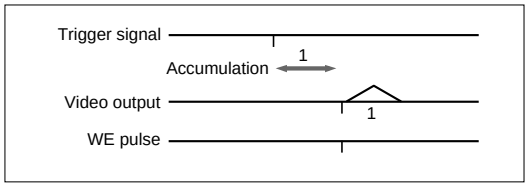
5 Press the MENU button to turn off the menu.

Accumulation mode	Trigger timing	Operation timing	Feature
FRM	Non-interlace		Produces a field still image. The CCD accumulates charges in frame units and its term is 1/60 seconds. As a result, the sensitivity decreases by 1/2.
FLD	Non-interlace		Produces a field still image. The CCD accumulates charges in field units and its term is 1/60 seconds. The sensitivity is the same as that of normal shooting.
FLD	Interlace		Produces a frame still image. You can shoot a fast-moving object with less blur than in the frame accumulation mode, but the vertical resolution is slightly lower.
FRM	Interlace		Produces a frame still image. You can obtain the image with the highest vertical resolution among the four modes, but more blur may occur when shooting a moving object than in field accumulation mode.

Shooting

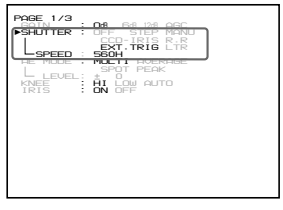
EXT. TRIG (external trigger shutter) mode

The camera starts to accumulate charges the instant an external trigger signal is input. It accumulates the charges with the shutter speed set in the menu and outputs a field image.
In this mode the delay time of the start of accumulation from the external trigger is only about 1 µs, which allows you to capture a fast-moving object.
The vertical resolution of the output image is a half that of normal output image since it is a field image.



To use the EXT. TRIG mode, set the menu as follows:
For details on menu operation, see "Operation through Menus" on page 14.

1 Set SHUTTER in the PAGE1/3 menu to EXT. TRIG. The SPEED display is highlighted.

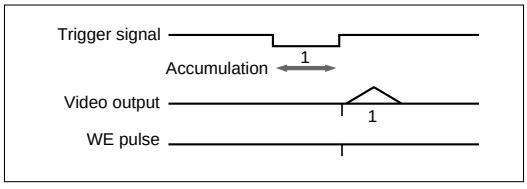


2 Move the cursor to SPEED with the FUNCTION DOWN button, and set the shutter speed to the desired speed in the range from 1H to 560H with the DATA UP or DOWN button.

3 Press the MENU button for three times to turn off the menu.

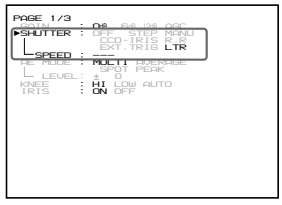
LTR (long-term reset) mode

The camera starts to accumulate charges the instant an external trigger signal is input. It accumulates the charges while the input level of the trigger signal is low, and outputs a field image when the level becomes high.
In this mode the delay time of the start of accumulation from the external trigger is only about 1 µs, which allows you to capture a fast-moving object. You can also shoot the object in the long exposure mode depending on the trigger timing. The vertical resolution of the output image is a half that of normal image since it is a field image.



To use the LTR mode, set the menu as follows:
For details on menu operation, see “Operation through Menus” on page 14.

1 Set SHUTTER in the PAGE1/3 menu to LTR.
The SPEED display shows “---”.



2 Press the MENU button for three times to turn off the menu.

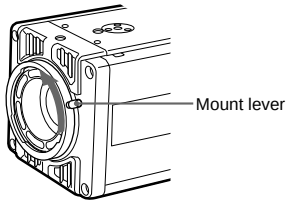
Chapter 3 Installation and Connections

Installation

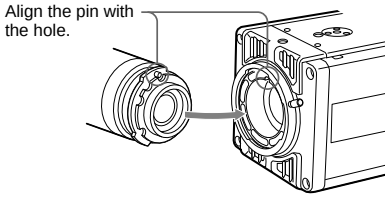
Mounting the Lens

Only 2/3-inch 48-mm bayonet-mount lenses can be attached to the camera.

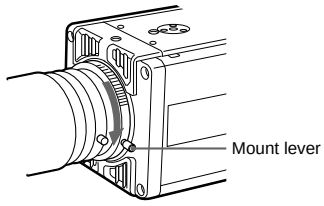
1 Turn the mount lever counterclockwise as far as it goes. (If the lens mount cap is in place, remove it.)



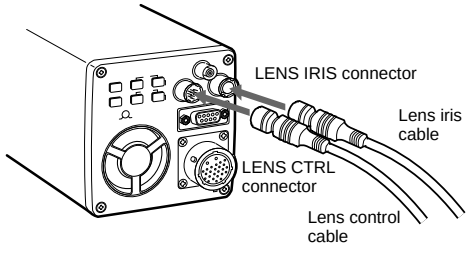
2 Align the positioning pin on the lens with the matching hole in the lens mount and attach the lens (not supplied).



3 Turn the mount lever clockwise as far as it goes to lock the lens in the lens mount.



4 Connect the lens control cable to the LENS CTRL connector and the lens iris cable to the LENS IRIS connector on the camera.



Note

If the lens iris cable is not long enough to connect to the LENS IRIS connector, an appropriate extention cable is required. For the extention cable, consult the dealer where you purchased the lens.

Lenses that can be remotely controlled by connecting to the LENS CTRL connector

Fujinon INS series and MACRO series lenses
Canon TV Communication System series lenses

Installation

Mounting a Microscope Adaptor

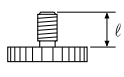
To attach the camera to a microscope, an operating microscope, etc., it is necessary to mount an appropriate adaptor. The method for mounting the adaptor is the same as for the lens.
For details, refer to the manual for each adaptor.

Mounting on a Tripod

To mount the camera on a tripod, use the screw hole on the top or bottom panel.

Mounting screw to be used

U1/4”, 20 UNC
ℓ = 4.5 mm ± 0.2 mm (ISO standard)
ℓ = 0.197 inches (ASA standard)



Mounting to a Wall or Ceiling

To attach the camera on a wall or ceiling, use the appropriate bracket and mounting screws (1/4”, 20 UNC).

Basic System Connection

To supply power to the camera, use the CMA-H10 camera adaptor (not supplied).

To connect the camera to the camera adaptor, you need only one CCZ-A cable. The cable supplies power to the camera and transmits video signals to the camera adaptor. The cable can be extended up to 100 m.

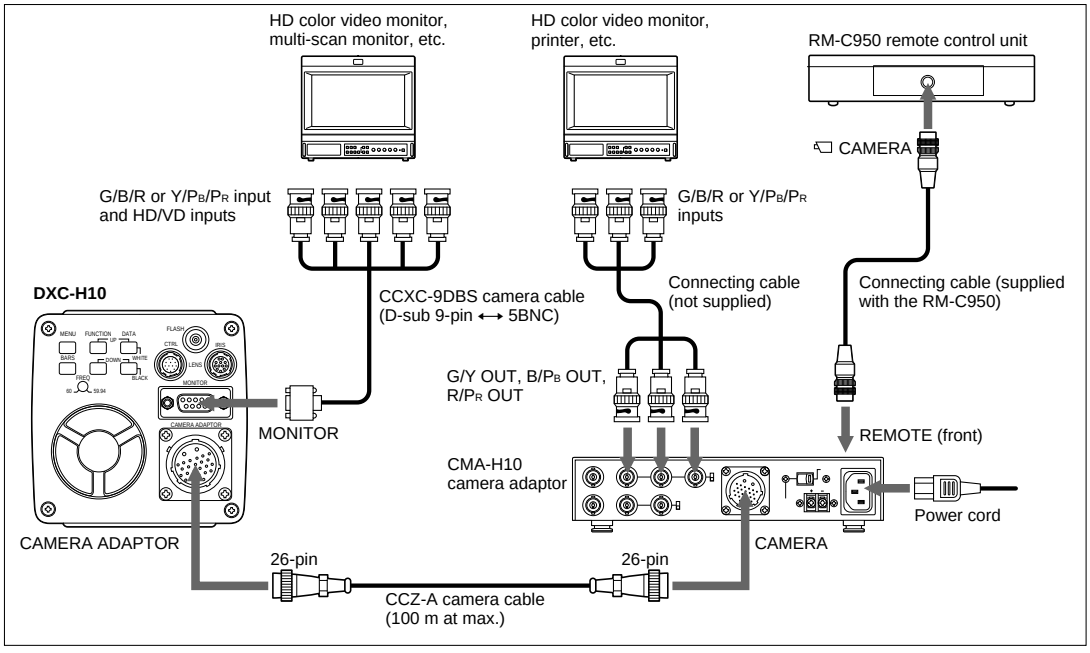
With the RM-C950 remote control unit (not supplied) connected to the camera adaptor, the camera and the lens can be remotely controlled by the remote control unit.

Note on connections

Be sure to turn off power supply for all equipment before making any connections.

Basic System Connection

Connecting to Video Equipment Using the Sony CMA-H10 Camera Adaptor



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Operating the Camera with the RM-C950 Remote Control Unit

When the RM-C950 remote control unit is used with this camera, the names and functions of the PRINT, FLASH and LONG EXPOSURE buttons and the GAIN control change as follows, in accordance with the functions of the camera.

Functions of the PRINT, FLASH and LONG EXPOSURE buttons and GAIN control on the RM-C950

Buttons/control on the RM-C950	Button/control names when used with the camera	Function
PRINT	—	Does not function with this camera
FLASH	BLACK	Use to start the auto black balance adjustment.
LONG EXPOSURE	SHUTTER SPEED	Use to set the shutter speed without displaying the menu when SHUTTER is set to STEP or MANU in the menu.
GAIN	GAIN	Use to set the gain level to 0 dB, 6 dB, 12 dB or AGC.

Attaching the supplied name sheet

The sheet for the button names when the camera is used with the remote control unit is supplied with the camera. Attach the name sheet to the control panel of the RM-C950.

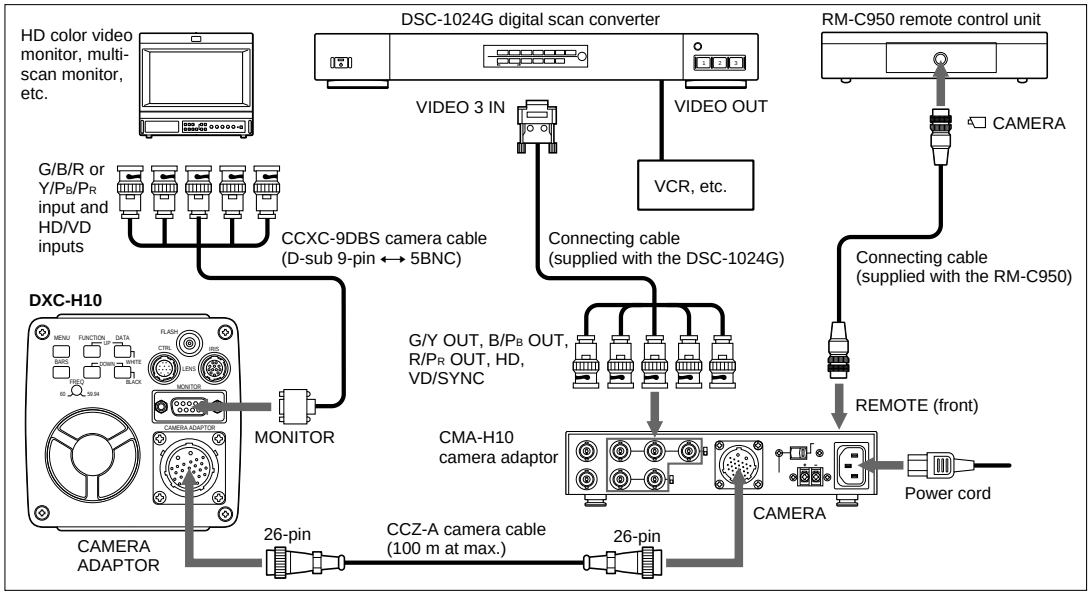
1 Before attaching, clean the control panel of the RM-C950.

2 Peel off the adhesive sheet at the back of the name sheet and attach the name sheet to the panel.

Connecting to the Digital Scan Converter

When you connect to the DSC-1024G digital scan converter (not supplied) in addition to the basic system connection, you can record or print the high-definition video signals shot with this camera by converting them into the NTSC or PAL format video signals.

For details of the digital scan converter, refer to the Operating Instructions supplied with the converter.



Precautions

This Sony product has been designed with safety in mind. However, if not used properly electrical products can cause fires which may lead to serious body injury.
To avoid such accidents, be sure to heed the following.

Heed the safety precautions

Be sure to follow the general safety precautions on pages 46 to 48, and in the “Operating Precautions” section on page 49.

In case of a breakdown

In case of system breakdown, discontinue use and contact your authorized Sony dealer.

In case of abnormal operation

• If the unit emits smoke or unusual smell,
• If water or other foreign objects enter the cabinet, or
• If you drop the unit or damage the cabinet:

1 Cut the power supplied to the unit.

2 Disconnect the camera cable and the connecting cables.

3 Contact your authorized Sony dealer or the store where you purchased the product.

Precautions

Safety Precautions

Note

To ensure the safe operation of this unit, be sure to heed the following precautions.

Do not allow foreign object to enter the unit

Allowing water or other foreign object to enter the cabinet may lead to fire and/or injury. If water or other foreign objects happen to enter the cabinet, switch off the power supplied to the unit, disconnect the connecting cables and contact your authorized Sony dealer.

Do not dismantle or modify the unit

Disassembly or modification of the unit may lead to fire and/or injury. Leave all adjustments, inspections and repairs of internal components to your authorized Sony dealer.

Be sure to install the unit properly

For queries on installation, contact the store where you purchased the product, or contact your authorized Sony dealer.
When attaching the unit to a wall or ceiling, make sure the point of attachment has sufficient strength to support the weight of the unit and mounting brackets. If the point of attachment lacks sufficient strength, the unit may fall, resulting in severe injury. Check the mounting brackets once a year to see that it remains tight.

Use recommended power supplies

Be sure to use the power supply (camera adaptor) specified in this manual. An unspecified power supply used with this unit may cause a fire hazard.

Use recommended camera cable and connecting cables

Use of camera cable and connecting cables other than those specified in this manual may lead to fire.

Take care not to damage cables

Use of damaged cables can lead to fires. Take special note of the following.

- Take care not to wedge cables between equipment and racks, walls, etc. during installation.
- Do not modify the cables and take care not to damage them.
- Do not place heavy objects on the cables or pull them with excessive force.
- Do not place the cables near heating devices or other heat sources.
- When disconnecting a cable, always pull out by the plug, not by the cable itself.
- If the cables become damaged, discontinue use and contact your authorized Sony dealer for replacement.
  Continued use of damaged cables may lead to fire.

Precautions

Do not install or operate in environments subject to high levels of smoke, steam, humidity or oil

Operation in any of the above environments may lead to fire. Use of this product in environments other than those specified in this manual may lead to fire.

Do not place the unit on an unstable base

The unit may fall, causing physical injury if used in any of the following places:

- On top of shaky, unstable table.
- On inclined surfaces
- In places subject to vibration or shock

Check that the place of attachment is strong enough to support the weight of this unit, and that the unit and attachment device are secure.

Be sure that the lens is screwed on properly

Always be sure that the lens is mounted securely. A loosely attached lens may come loose and fall, resulting in personal injury.
Check to see that the lens remains attached firmly once every year.

Disconnect the camera cable and the connecting cables before moving the unit

If the unit is moved with the camera cable and the connecting cables attached, the cables may be damaged, resulting in fire.

Operating Precautions

Operating or storage location

Avoid operating or storing the camera in the following locations:
- Extremely hot or cold places (Operating temperature: –5°C to +45°C [23°F to 113°F])
- Exposed in direct sunlight for a long time, or close to heating equipment (e.g., near heaters)
- Close to sources of strong magnetism
- Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters

Ventilation

To prevent internal heat buildup, do not block the air filters and the fan around the camera. This may cause damage and/or injury as the temperature inside the unit rises.

Transportation

When transporting the camera, repack it as originally packed at the factory or in materials equal in quality.

Cleaning

- Use a blower to remove dust from the lens or optical filter.
- Use a soft, dry cloth to clean the external surfaces of the camera. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.

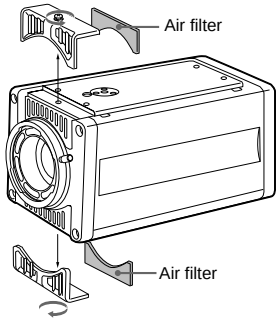
Precautions

Cleaning the air filter

Check the air filters on the front of the camera periodically. If they are dirty, remove the air filters from the camera, clean them with detergent solution, wipe dry, then attach the filters to the camera.

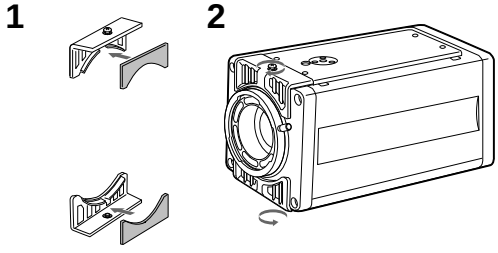
To remove the air filter

Loosen the two screws to detach the cover and pull out the two pieces of the air filter located at the upper and lower parts of the front panel.



To attach the air filter

Fit the air filters into the covers, attach them to the camera and fasten the screws.

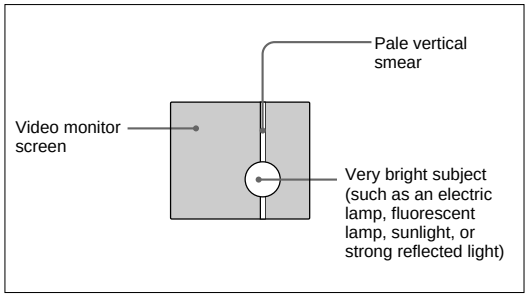


Typical CCD Phenomena

The following phenomena may appear on the monitor screen while you are using the DXC-H10 color video camera. These phenomena stem from the high sensitivity of the CCD image sensors, and do not indicate a fault within the camera.

Vertical smear

A “smear” may appear to extend vertically from very bright subjects, as shown below.


Pale vertical smear
Video monitor screen
Very bright subject (such as an electric lamp, fluorescent lamp, sunlight, or strong reflected light)

This phenomenon is common to CCD imaging elements using an interline transfer system, and is caused when electric charge induced by infrared radiation deep within the photo sensor is transferred to the resistors.

Aliasing

When shooting fine stripes, straight lines or similar patterns, the lines may become slightly jagged.

Blemishes

A CCD image sensor consists of an array of individual picture elements (pixels). A malfunctioning sensor element will show up as a single pixel blemish in the image. This is generally not a problem.

White speckles

When you shoot a poorly illuminated object at a high temperature, small white dots may appear all over the entire screen image.

List of Messages

The following messages may appear on the screen. Take the necessary measures shown below.

Messages while adjusting the automatic black balance

Message	Meaning	Remedies
AUTO BLACK: OK	Automatic black balance adjustment has succeeded.	—
AUTO BLACK: NG	The camera has failed to adjust the black balance.	Try to perform the automatic black balance adjustment again. If it is not successful, consult your authorized Sony dealer.
AUTO BLACK: NG IRIS CLOSE?	The camera has failed to adjust the black balance.	Check that the iris on the lens is closed. Then adjust the black balance again.

Messages while adjusting the automatic white balance

Message	Meaning	Remedies
AUTO WHITE: OK	Automatic white balance adjustment has succeeded.	—
AUTO WHITE: NG	During adjustment the object is moving and the camera cannot automatically adjust the white balance.	Make the object stable and try to perform the automatic white balance adjustment again.
AUTO WHITE: NG LEVEL LOW	Due to low luminance level of the image, the camera has failed to adjust the white balance automatically.	Adjust the luminance by changing the iris, gain and lighting, then try to perform the automatic white balance adjustment again.
AUTO WHITE: NG C. TEMP LOW	The camera cannot automatically adjust the white balance as the color temperature is too low.	Automatic white balance cannot be adjusted. Change the lighting as required.
AUTO WHITE: NG C. TEMP HI	The camera cannot automatically adjust the white balance as the color temperature is too high.	Automatic white balance cannot be adjusted. Change the lighting as required.

Other messages

Message	Meaning	Remedies
CAUTION! TEMPERATURE HIGH TEMPERATURE ***°C	The temperature inside the camera has risen to abnormal levels. (***°C)	Check the following: • Is an ambient temperature around the camera too high? → Operate the camera under an ambient temperature of less than 45°C. • Did you wrap the camera with a cloth and the like, or block the openings for the air filters and fan? → Remove the block as it prevents radiation of heat. • Are the air filters clogged? → Clean the air filters. • If the fan is not working, it needs to be repaired. Consult your authorized Sony dealer.

Specifications

Image system/optical system

Image device
2/3-inch CCD, interline transfer type
Effective picture elements
1920 (horizontal) × 1035 (vertical)
Shooting system
CCD 3-chip
Lens Prism type, F1.4
Lens mount 2/3-inch, 48 mm bayonet type

Video system

Synchronization
Internal/external synchronization, automatic switching
Signal format
HD format (conforms to BTA standard)
Output frequency (horizontal/vertical)
33.75 kHz/60 Hz or 33.716 kHz/59.94 Hz (60 Hz or 59.94 Hz switchable)

Functions/performance

Horizontal resolution
1000 TV lines
Minimum illuminance
16 lux (F1.4, G or Y: 100%, gain: +12 dB)
Sensitivity 2000 lux (F8, 3,200K)
Signal-to-noise ratio
50 dB (Y, Gain: 0 dB, Gamma: OFF, 100 kHz to 30 MHz)
Gain control Fixed: 0 dB, +6 dB, +12 dB selectable
AGC: Automatically adjusted within the range from 0 dB to +12 dB.
White balance
AWB: One-push automatic adjustment (2,500K to 9,000K) (R. PAINT and B. PAINT adjustable)
ATW: Automatic tracing (R. PAINT and B. PAINT adjustable)
MANU: Manual adjustment (R. GAIN and B. GAIN adjustable)
Color temperature
3,200K/5,600K
Electronic shutter speed
CCD IRIS: Automatic exposure control (within the range from 1/60 to 1/10000 seconds)
STEP: 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, 1/20000, 1/40000 and 1/100000 seconds
MANU: 2 to 256 frames in low-speed mode, 1 to 560H in high-speed mode (1H = 29.63 µs)

External trigger shutter
R. R: Restart/reset with the input of an external trigger signal
EXT. TRIG: Instant shutter mode with an external trigger signal
LTR: Long-term reset to determine the exposure time depending on the pulse width of an external trigger signal

AE mode
MULTI: Automatic exposure adjustment in accordance with the luminance distribution on the nine-divided screen
AVERAGE: Automatic exposure adjustment by detecting the average luminance level on the whole screen
SPOT: Automatic exposure adjustment by detecting the luminance level on the center spot of the screen
PEAK: Automatic exposure adjustment by detecting the peak luminance level on the whole screen
Focus level adjustable in all modes

Knee characteristics
HI: Knee point: 100%
LOW: Knee point: 90%
AUTO: Automatically adjusts the knee point within the range of 80 to 100% according to the contrast of the image.

Master pedestal
Adjusts the pedestal levels of G, B and R channels simultaneously. (Balance of the levels of the channels adjustable with R. PED and B. PED)

Linear matrix
ON/OFF switchable

Vertical shading compensation
OFF/MANUAL switchable

Gamma compensation
ON/OFF switchable

Reversal to negative or positive
ON/OFF switchable

Accumulation mode
Field/frame switchable

Detail compensation
ON/OFF switchable (Levels adjustable on the ON position)

Flash synchronization
ON/OFF switchable

Video signal output mode
GBR/YP_BP_R switchable

Sync signal format
Tri-level/bi-level switchable

Sync signal input/output mode
Input/output switchable (HD/VD and SYNC signals switched simultaneously)

Horizontal phase
Adjustable

Specifications

Inputs/outputs

Video input/output signals
Y/R/G/B output: 1 Vp-p (75 ohms)
P_B/P_R output: 0.7 Vp-p (75 ohms)
HD/VD input/output: 1 Vp-p (75 ohms)
SYNC input/output: 0.6 Vp-p (tri-level, 75 ohms), 0.3 Vp-p (bi-level)
WE pulse: TTL level, negative

External sync input
SYNC or HD/VD switched automatically
Acceptable frequency deflection: less than ±35 ppm

External trigger input
TTL level, negative
Pulse width: more than 3H

Input/output connectors
MONITOR: D-sub 9-pin
CAMERA ADAPTOR: 26-pin, round shape (male), bayonet lock type
LENS IRIS: 12-pin, round shape (female)
LENS CTRL: 12-pin, round shape (male)
FLASH: small coaxial type

General

Power supply
15 V DC (10.5 to 15 V)

Power consumption
Approx. 25 W

Operating temperature
–5°C to +45°C

Storage temperature
– 20°C to +60°C

Operating humidity
20% to 80% (free of condensation)

Storage humidity
20% to 95% (free of condensation)

Dimensions
$95 \times 95 \times 160$ mm ($3\ ^3/_4 \times 3\ ^3/_4 \times 6\ ^3/_8$ inches) (w/h/d) (not including the projecting parts)

Mass
Approx. 1.2 kg (2 lb 10 oz)

Supplied accessories
Lens mount cap (1)
Name sheet for the buttons on the RM-C950 (1)
Operating Instructions (1)

Design and specifications are subject to change without notice.

Optional Accessories

Camera adaptor

CMA-H10 camera adaptor

Remote control unit

RM-C950 remote control unit (connecting cable supplied)

Digital scan converter

DSC-1024G digital scan converter (connecting cable supplied)

Microscope adaptors and couplers

MVA-690 microscope adaptor (one-way type)
MVA-20 microscope adaptor (with automatic dimmer)
MVA-33 microscope adaptor (with manual iris)
MVAC-33-0 microscope coupler (for Olympus microscope)
MVAC-33-N microscope coupler (for Nikon microscope)
MVAC-33-SM microscope coupler (for Nikon microscope)

Connecting cable for camera adaptor

CCZ-A camera cables
CCZ-A2 (2 m, 6.5 ft)
CCZ-A5 (5 m, 16.5 ft)
CCZ-A10 (10 m, 33 ft)
CCZ-A25 (25 m, 82 ft)
CCZ-A50 (50 m, 164 ft)
CCZ-A100 (100 m, 330 ft)

Connecting cable for monitor

CCXC-9DBS cable (D-sub 9-pin ⟷ 5BNC)

SECTION 2
SERVICE INFORMATION

2-1. DIP SWITCH SETTING

TG-192 Board

S801 Default setting when shipped from the factory

S803 Default setting when shipped from the factory

Note : All functions are for setting during production in the assembly factory.

2-2. EXTENSION BOARD FOR SERVICING

When it is necessary to measure points that cannot be measured in the current state of the unit in repairs, etc., use the extension board as shown in the following figure.

Extension board EX-618	J-6431-550-A

PR-233, TG-192 or IE-55 board can be extended.

Extension board EX-674	J-6431-520-A
Extension harness 30P	J-6431-530-A

When PR-233 or IE-55 board is extended, BI-124 board can be extended at the same time.

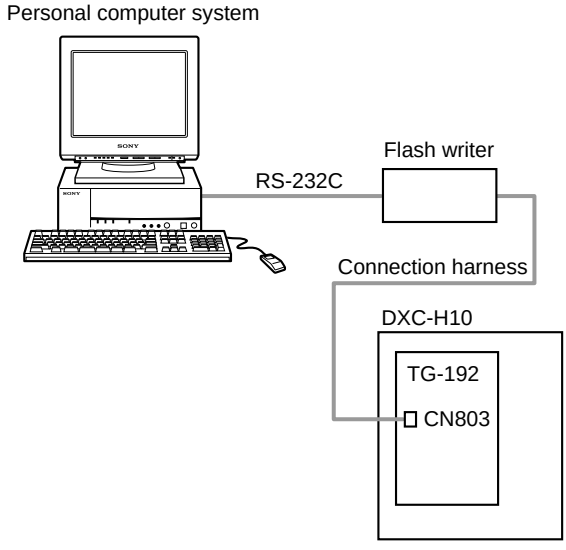
2-3. WRITING DATA TO MICROPROCESSOR

Write the data when replacing the microprocessor (IC841).

Required Equipment

- Personal computer system
  MS-DOS® mode of IBM PC-AT or compatible machine
- Flash memory writing adapter
  Flash writer FLASH 1 manufactured by Hokuto Electronics Co.
- Connection harness (J-6431-670-A)
- Downloading data (J-6431-760-A)
  (File name : CAM1.MOT)

Connection Diagram



Procedure

1. Turn on the camera.
2. Start up the personal computer in MS-DOS® mode. Insert the floppy disk containing the flash writer.
3. Change the prompt to the floppy drive. Enter W and press ENTER.
4. Remove the floppy disk. Insert the disk containing the data to be wrote. Select CAM1.MOT and press ENTER three times to start writing data.
5. When writing data has completed, turn off the camera and remove the connection harness.

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SECTION 3
THEORY OF OPERATION

BI-124 Board

The BI-124 board includes CCD imager (ICX090), its bias circuit and output buffer circuit. This board is made of the two layers of flexible board in which the three channels of Green, Blue and Red are all incorporated.

PR-233 Board

The CCD output signal of the three channels of Green, Blue and Red, is sent to the PR-233 board which performs the analog signal processing starting from pre-amplifier up to the GBR/YPbPr matrix circuit. Since all channels of green, blue and red have the same circuit configuration, only the green channel circuit is described below.

The CCD output signal is supplied from the BI-124 board in the two groups of G1 and G2 where the pixels of odd numbers in the horizontal lines are grouped into G1 and the pixels of odd numbers in the horizontal lines are grouped into G2. The G1 and G2 signals are sent to preamplifiers IC101 and IC102 of the PR-233 board. The preamplifiers are the inverting amplifiers with about +6 dB gain having the built-in high speed clamp function.
The G1 and G2 signals have the same signal phase at the preamplifier output. The G2 signal is delayed by DL102 until the G1 and G2 signals have the same phase relationship as that of the pixel arrangement in the original CCD imager. The G1 and G2 signals are added by IC103 in the analog form to synthesize the green channel signal. The synthesized green channel signal passes through a low-pass filter having pass-band of 37 MHz, receives the pre-white-balance of RV102 and send to IC103 where the signal is amplified and clamped.

In the following IC106, the reference pulse that is used as the amplitude reference signal in the gain control amplifier, is inserted during the blanking of the CCD output signal. The reference signal has normally amplitude of 200 mV but is modulated by the vertical rate sawtooth signal when the CCD output receives the vertical shading correction. This modulation is applied to the blue and red channels in the inverted phase with respect to the green channel.

Input signal to the gain control amplifier can be observed at TP104 where the video signal and reference signal appear in negative polarity with 200 mV amplitude in the standard setup. This video signal is buffered and sent also to the AE detection circuit of the TG board.

The gain control amplifier IC107 consists of the dual feedback loops: one is the feedback clamp that maintains the dc level of the output signal to 0V and the other is the gain feedback loop that functions to maintain the reference signal amplitude to a constant (reference) amplitude.. Gain selection of either 0 dB, or 6 dB or 12 dB, and the AGC operation are controlled by the microprocessor.

Output signal from the gain control amplifier, is again amplified by amplifier IC110 and others, and is adjusted of its amplitude until the video signal has amplitude of 350 mV at TP111 with the standard setup. Video signal at TP111 is also negative polarity. The reference pulse that is inserted into the horizontal blanking period, is removed by IC112.

The video signal passes through the gamma correction circuit having characteristics close to folded lines and knee circuit of IC113 and IC177. The video signal is then amplified by the latter half of IC113 until the video signal has the amplitude of 700 mV at TP114. This video signal is buffered and sent also to the AE detection circuit of the TG board.

The video signal at TP114 passes through the color linear matrix circuit consisting of IC117 and IC118, through the video signal selector circuit IC119 selecting either CCD output signal or internal color bar signal, through another video signal selector circuit IC116 and IC120 selecting either GBR or YPbPr, is buffered by IC191 and sent to the IE-55 board.

IE-55 Board

The GBR or the YPbPr signal is supplied from the PR-233 board to the IE-55 board where sync signal is added, character signal is added, negative/positive inversion and generation of detail signal are performed. The CCD output signal is added of the detail signal, and receive black clip and white clip by the analog signal processing. The IE-55 board includes all of the remaining circuits including the video output driver. The G-channel circuit only is described below since all three channels of green, blue and red have the same circuit configuration.

The G/Y signal coming from the PR-233 board is introduced to a low-pass filter of 37 MHz FL1304, inverted and amplified by the clamping amplifier IC1345 and associated circuits. The video signal at TP1301 is the positive polarity signal having the amplitude of about 1.5 V p-p with standard setup.

The video signal A/D converted to the 8-bit digital video signal by IC1304 and IC1305. As these two A/D converters are operating on the two clocks of 37 MHz that have opposite polarity each other, sampling at the frequency of 74 MHz is effectively performed. The output data from the A/D converter is delayed by 1100 clock (equivalent to 1H period) per every stage using the FIFO memory of IC1306, IC1307 and IC1308.

The digital video signal consisting of three channels, are aligned to the same timing by IC1304, IC1306 and IC1308, and enter the digital filter IC1312 where detail signal is digitally generated. The detail signal is converted to analog detail signal by IC1325 and IC1348.

The main video signal is output from IC1306 and IC1307, and supplied to the digital process IC (IC1310) where the video signal is digitally synthesized to the 74 MHz rate signal, sync signal is added, character signal is added, negative/positive inversion is performed. The main video signal is output in the form of 9-bit digital data that is converted back to analog signal by IC1326 and ICI333.

The detail signal (TP1306) is added to the main video signal (TP1307) by the amplifier consisting of IC1333 to provide image enhancement. The detail signal is not added to the Pb and Pr signals during the YPbPr mode. In the DXC-H10 enhancement system, the detail signal that is generated from the G signal is added to the GBR signal during the GBR mode, and the detail signal generated from the Y signal is added to the Y-channel only during the YPbPr mode. Amount of detail signal to be added can be adjusted by changing the reference voltage of the enhancement D/A converter IC1325 in the range of 1V ± 6 dB.

The video signal after image enhancement receives black-clip and white-clip, passes through a 37 MHz low-pass filter, is outputted from a 75 ohm driver IC1336 and sent to the CN-1494 board via the MB-758 board.

MB-758 Board

The MB-758 board is used to distribute the various power supply voltages that are supplied by the DC-to-DC converter, to each circuit board through LC filters. The MB-758 board functions as mother board to which circuit boards are connected for inter-connection each other.

TG-192 Board

The TG-192 board consists of the two blocks. One is the pulse generator block which generates sync signals and CCD drive timing pulses from the fundamental clock of the camera system. The other block is the system control block centering around microprocessor.

The system clock block of the TG-192 board uses the two voltage-controlled crystal oscillators (VCXO) X801 and X803 so that the sync signal satisfies both of the vertical frequencies 60 Hz and 59.94 Hz that are defined by BTA specifications. The oscillating frequencies can be selected by the output signal from the FREQ switch on the rear panel that selects the circuits using IC848, IC855, Q816 and Q817.

IC828 is a timing generator that generates the required pulses for CCD drive, using the 74 MHz clock that is input to pin-2. Among the CCD drive pulses, the CCD V-register drive pulse is supplied to CCD through the V-driver IC802 and the VH- and HHG-drive pulses are supplied to CCD through the VH-driver IC801. At the same time, the H1 and H2 drive pulses that are generated by IC861 to IC863 are supplied CCD through the H-driver of each channel on the DR-351 board. IC828 has the electronic shutter function and output the shutter pulse from pin-71.

IC809 is the sync signal generator that generates various sync pulses using the 74 MHz clock which is input to pin-62. IC809 has the external sync locking function so that the sync signal from IC809 can be locked to the external sync signal that is separated by IC812 and locked by PLL circuit. IC809 has the built-in H PHASE shift function. However, camera cable of the DXC-H10 can be extended to a maximum of 100 meters, amount of H shift is not sufficient with the built-in H PHASE shift function. A separate H shift circuit IC817 to IC820 is externally added to provide sufficient amount of H shift.

The menu display that enables users control, is provided by the character generator IC806. This type of IC is normally operated on the self-oscillating frequency. However, because characters are inserted in the form of digital data, to the main video signal, in the IE-55 board in the DXC-H10, the character pulse that is synchronized with 74 MHz is necessary. So, the 74 MHz signal is divided by 4 to produce the 18 MHz clock that is input to pin-9 and is used as the clock. Brightness of the menu characters can be selected in the two steps using the color function of this IC.

IC841 is a microprocessor that controls various functions such as EVR, sync generator and timing generator through serial bus. IC841 reads various camera signals after they are detected and A/D converted by the internal A/D converter in order to control the AE functions such as lens iris, CCD IRIS and AGC. It also communicates with external equipment such as camera adapter through serial interface of IC845, Q814 and Q815. Clock for the microprocessor is generated by an exclusive 16 MHz crystal oscillator.

The EEPROM (IC842) that is used to store the EVR adjustment values, is located on this board. When the TG-192 board is exchanged or IC842 is exchanged due to repair or by any other reasons, re-adjustment of the camera is necessary.

Because the microprocessor of the DXC-H10 is the flash memory type, program can be downloaded while the microprocessor is installed in the DXC-H10. If upgrading of software program becomes necessary in the future, upgrading is possible by connecting a program-write tool to the service connector CN803 of the DXC-H10 to download a program.

DR-351 Board

The DR-351 board consists of the H1- and H2-drivers, and the shutter driver. The H1- and H2-drivers receive the drive pulses from the timing generator of the TG-192 board and drive the CCDs of green, blue and red. The shutter driver circuit drives the CCDs of all channels. The DR-351 board performs the function as a relay circuit board to supply the powers to the BI board, and to supply the V- and DH-driver output pulse that are supplied from the TG board. Because the H-driver has large amount of heat dissipation, the DR-351 board is made of aluminum for effective heat dissipation.

CN-1494 Board

The CN-1494 board has the connectors for external connection of the rear panel, menu operation switches, frequency select switch (FREQ), speed control circuit for cooling fan, flash drive circuit, and sync signal input/output selector circuit. The speed control circuit for cooling fan, receives the output signal from the temperature sensor that is supplied from the TG board and control the fan drive voltage so that rotating speed of the fan is decreased when temperature is low in order to reduce the fan noise.
Half of the CN-1494 board is covered by shield to prevent radiation of unwanted interference signals. When this shield plate is removed, access to the two chip fuses that are the critical parts for safety, is possible.

DC-DC Converter

The DC-DC converter is installed directly to the camera chassis to obtain the effective heat dissipation. The DC-DC converter is equipped with harness with the input/output connectors. The harness is connected to the CN-1494 board with 2-pin connector and the output harness is connected to MB-758 board with 9-pin connector respectively.

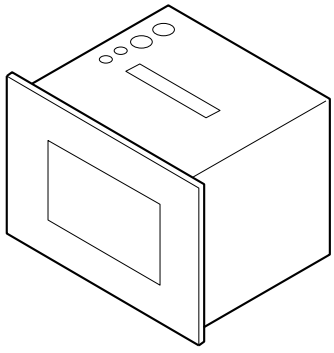
SECTION 4
ADJUSTMENT

4-1. PREPARATION

4-1-1. Adjustment Tools and Measuring Equipment

Specified tools

Pattern box PTB-600	J-6098-800-A
Light source for adjustment charts AC 90 to 240 V	



This is the pattern box for HI-VISION specifications.

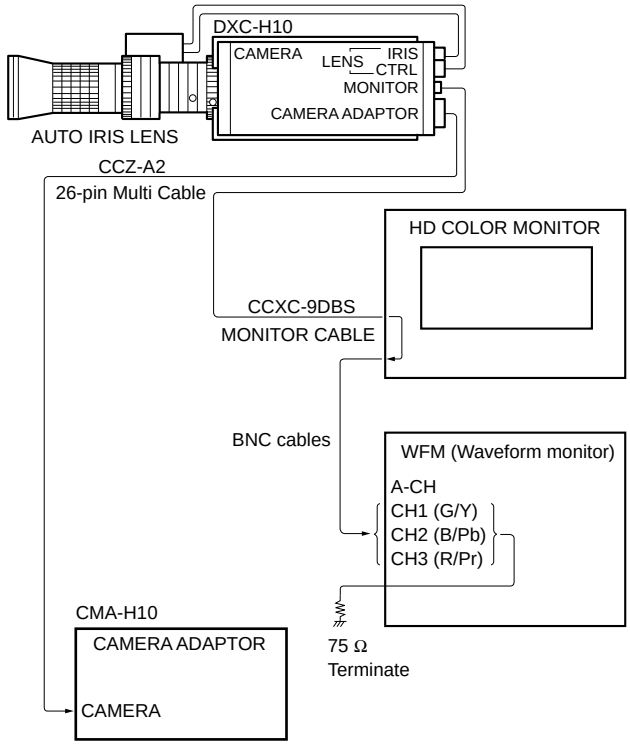
Specified commercially available tools

- Lens (bayonet type with auto iris)
  2/3-inch lens VCL-1012BY (made by Sony) or equivalent
- Monitor cable
  “CCXC-9DBS” (manufactured by Sony)
- Camera adapter
  “CMA-H10” (manufactured by Sony)
- Camera cable
  “CCZ-A2” (manufactured by Sony)
- ND filter
  “ND-4” 25% (manufactured by KENKO)

General purpose commercially available tools

- Gray scale chart for HI-VISION
  “Transparent type Test Chart for HI-VISION”
  (Manufactured by Television Engineering Society)
  ∗ : This chart is available as a part of chart set consisting of the four charts.
- Dual trace oscilloscope
- HD signal waveform monitor (1735HD manufactured by Tektronix)
- Frequency counter
- Digital voltmeter
- Adjustment screwdriver (capable of adjusting 2 mm diameter adjustment controls)

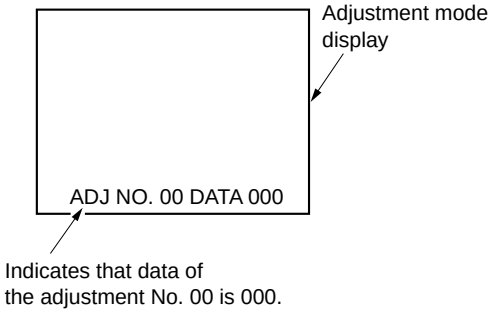
4-1-2. Equipment Connection Diagram



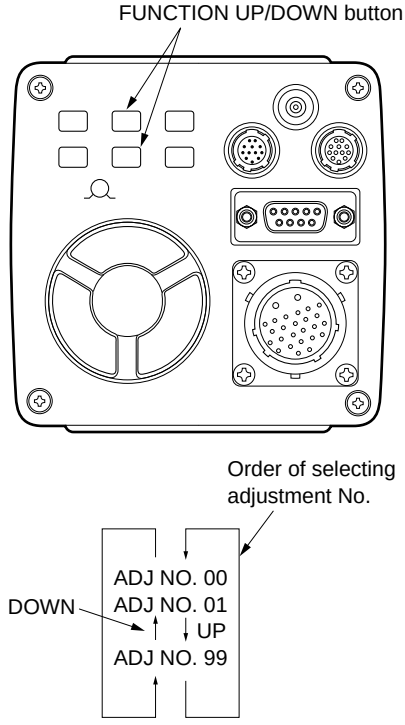
4-1-3. Electronic Volume Control Adjustment Method

The DXC-H10 has the various volume controls (EVR) for adjustment in addition to the conventional volume controls that are mounted on the respective printed board. The method of electronic volume controls is shown below.

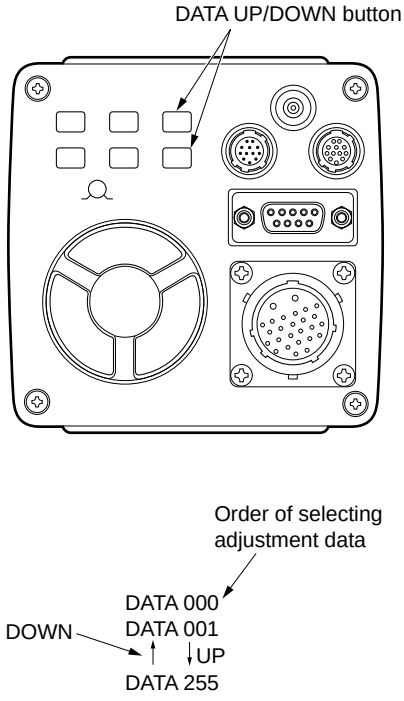
1. Electronic volume control (EVR) adjustment mode
   Set the switch S804 on the TG-192 board to the ADJ position to enter the electronic volume control adjustment mode. When the DXC-H10 enters the electronic volume adjustment mode, the adjustment No. of the electronic volume and its data are shown on display.



2. Selection of electronic volume control (EVR)
   Every pressing of the FUNCTION button (UP, DOWN) on the rear panel changes the adjustment No. (ADJ NO.) on the monitor display. When the FUNCTION button is kept pressed, the display changes continuously.



3. Selection of electronic volume control (EVR)
   Every pressing of the DATA button (UP, DOWN) on the rear panel changes the data display on the monitor display. (This is the same procedure as in the conventional adjustment using the conventional volume controls.)



4-1-4. Switching Setting Before Starting Adjustment

Menu setting :

Press the MENU button to show the menu. Set the initial values of the respective items using the FUNCTION button and the DATA button. (Refer to page 1-13.)

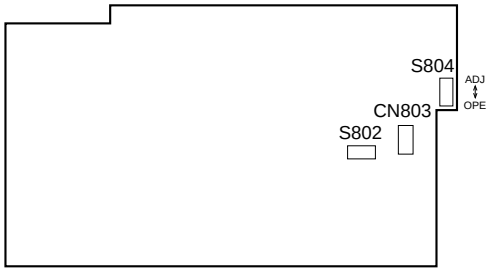
TG-192 board :

S804 (ADJ/OPE): ADJ

Note

When the TG-192 board or IC842(E²PROM) is exchanged, turn on the main power of the camera while pressing the switch S802 (Super Reset) on the TG-192 board.
All EVR data will be reset to the initial value.
If this operation is performed incorrectly, all data of electronic volumes will be erased.

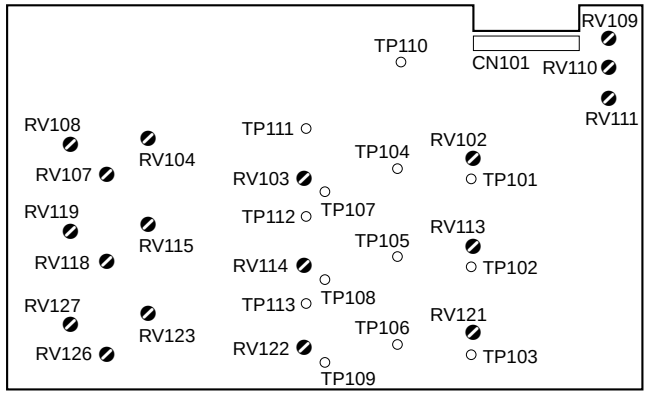
TG-192 Board (B side)



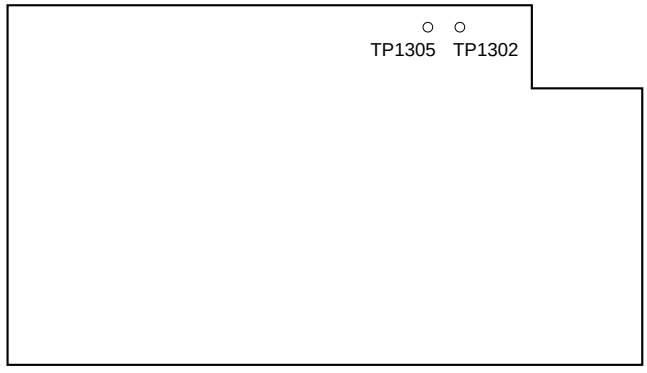
4-2. ADJUSTMENT

Adjustment point

PR-233 Board (B side)



IE-55 Board (B side)

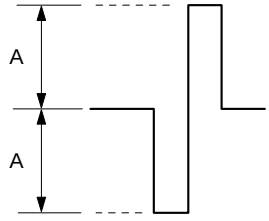


4-2-1. A/D REF Voltage Adjustment

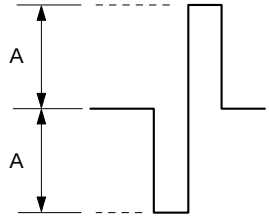
Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Digital multimeter (DC V)	IE-55 board TP1302 GND : TP1305	ADJ NO. 49		AD REF Voltage : 2.0 V ±10 mV

4-2-2. Sync Level Adjustment

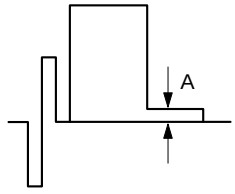
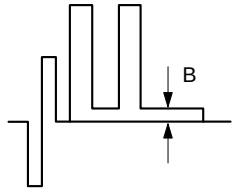
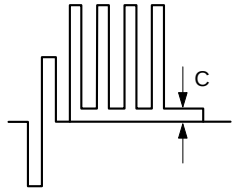
When the suffix number of the IE-55 board is -11:

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X1 H TWO LINE	CH1 (G out)	ADJ NO.50		 **A = 300 ±5 mV**
	CH3 (R out)	(Check only)		
	CH2 (B out)	(Check only)		

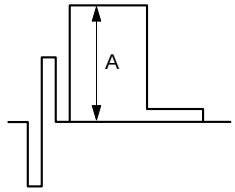
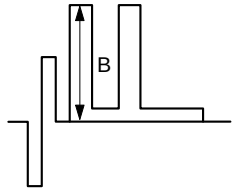
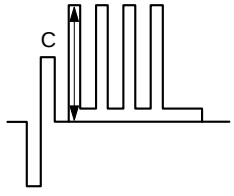
When the suffix number of the IE-55 board is -12 or later:

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X1 H TWO LINE	CH1 (G out)	ADJ NO.50		 **A = 300 ±5 mV**
	CH3 (R out)	ADJ NO.51		
	CH2 (B out)	ADJ NO.52		

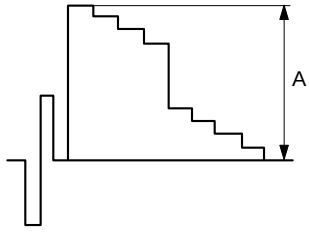
4-2-3. GBR Black Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X5 H TWO LINE	CH1 (G out)	ADJ NO.44	Rear panel BARS : ON	 **A = 20 ±5 mV**
	CH3 (R out)	ADJ NO.45		 **B = 20 ±5 mV**
	CH2 (B out)	ADJ NO.47		 **C = 20 ±5 mV**

4-2-4. GBR Color Bar Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X1 H TWO LINE	CH1 (G out)	PR-233 board ⊘RV107	Rear panel BARS : ON	CH1 (G out)  **A = 700 ±10 mV**
	CH3 (R out)	PR-233 board ⊘RV118		CH2 (R out)  **B = 700 ±10 mV**
	CH2 (B out)	PR-233 board ⊘RV126		CH3 (B out)  **C = 700 ±10 mV**

4-2-5. Y Color Bar Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X1 H TWO LINE	CH1 (Y out)	PR-233 board ⊘RV108	Menu PAGE 3/3 GBR/YPbPR : YPbPr	 **A = 700 ±10 mV**

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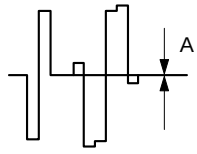
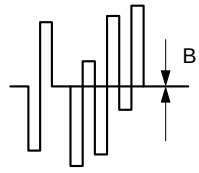
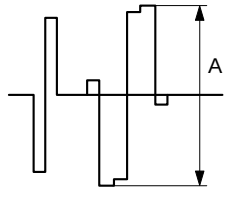
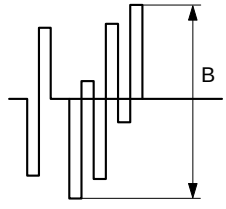
4-2-6. PbPr Black Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X5 H TWO LINE	CH3 (Pr out)	ADJ NO.46	Menu PAGE 3/3 GBR/YPbPr : YPbPr	 **A = 0 ±5 mV**
	CH2 (Pb out)	ADJ NO.48		 **B = 0 ±5 mV**

4-2-7. PbPr Color Bar Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT CH-A V FILTER, X1 H TWO LINE	CH3 (Pr out)	PR-233 board ⊘RV119	Menu PAGE 3/3 GBR/YPbPr : YPbPr After completion of adjustment: Rear panel BARS : OFF Menu PAGE 3/3 GBR/YPbPr : GBR	 **A = 700 ±10 mV**
	CH2 (Pb out)	PR-233 board ⊘RV127		 **B = 700 ±10 mV**

4-2-8. Clock Frequency Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Frequency counter	TG-192 board TP802	ADJ NO.58	Rear panel 59.94 (FPS)	Clock frequency : 74.175824 MHz ±200 Hz
	GND : TP801	ADJ NO.57	60 (FPS)	74.250000 MHz ±200 Hz

4-2-9. V-SUB Adjustment

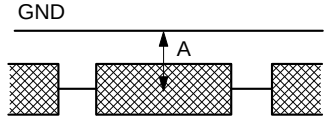
[Procedure]

The V-SUB setting value of the respective CCD imagers is printed on their rear with the two digit number. The number can be seen through hole of the BI-124 board. Read the EVR setting value that corresponds to the two digit number. Set the data to the V-SUB value using the EVR.
Perform the above described setting to the three channels of B, G and R of CCD imager.

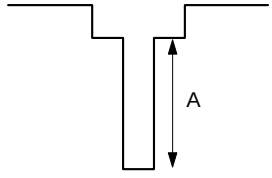
V SUB symbol	A0 to A2	A3 to A7	A8 to C2	C3 to C7	C8 to d2	d3 to d7	d8 to E2	E3 to E7
EVR setting value	68	76	84	92	100	108	116	124
V SUB symbol	E8 to f2	f3 to f7	f8 to G2	G3 to G7	G8 to h2	h3 to h7	h8 to J2	J3 to J7
EVR setting value	131	139	147	155	163	171	178	186
V SUB symbol	J8 to K2	K3 to K7	K8 to L2	L3 to L7	L8 to L9			
EVR setting value	194	202	210	218	226			

Adjustment point : B-ch ADJ NO. 8
G-ch ADJ NO. 1
R-ch ADJ NO. 4

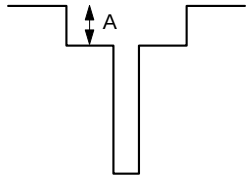
4-2-10. PA DC Offset Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 50 mV/div 5 µs/div	PR-233 board TP101 (G-ch) GND : TP110	ADJ NO.3	Lens iris : close “C”	 **A = 0 ±10 mV**
	PR-233 board TP102 (R-ch)	ADJ NO.7		
	PR-233 board TP103 (B-ch)	ADJ NO.11		

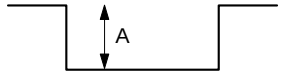
4-2-11. Ref. Pulse Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 50 mV/div 5 µs/div	PR-233 board TP104	ADJ NO.17	Menu PAGE 2/3 WHT.BAL : MANU MATRIX : OFF Menu PAGE 3/3 GAMMA : OFF	 **A = 200 ±5 mV**
	PR-233 board TP105	ADJ NO.16		
	PR-233 board TP107	ADJ NO.78		
	PR-233 board TP108	ADJ NO.79		
	PR-233 board TP109	ADJ NO.80		

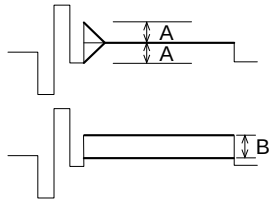
4-2-12. Black Tracking Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 20 mV/div 5 µs/div	PR-233 board TP104 (G-ch)	ADJ NO.13		 **A: Must be minimized.**
	PR-233 board TP105 (R-ch)	ADJ NO.12		
	PR-233 board TP106 (B-ch)	ADJ NO.14		

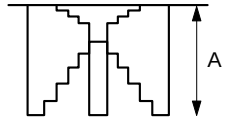
4-2-13. Blanking Cleaning Coarse Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 20 mV/div 5 µs/div	PR-233 board TP111 (G-ch)	ADJ NO.22		 **A: Must be minimized.**
	PR-233 board TP112 (R-ch)	ADJ NO.32		
	PR-233 board TP113 (B-ch)	ADJ NO.42		

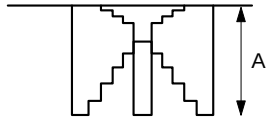
4-2-14. H Shading Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	PR-233 board ⊘RV109	Lens iris : Close “C” Menu PAGE 3/3 GAMMA : OFF	1. Turn RV109, RV110 and RV111 fully clockwise. 2. Turn the respective variable resistor to left gently and set the first position that A (H Shading) and B (Flicker) are minized. 
	CH3 (R out)	PR-233 board ⊘RV110		
	CH2 (B out)	PR-233 board ⊘RV111		

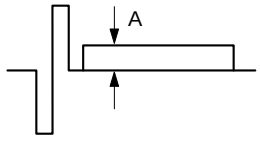
4-2-15. Front-stage Fixed Gain-up Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 50 mV/div 5 µs/div	PR-233 board TP104 (G-ch)	PR-233 board ⊘RV102	Object : Gray scale chart Lens iris : F8	 **A = 200 ±5 mV**
	PR-233 board TP105 (R-ch)	PR-233 board ⊘RV113		
	PR-233 board TP106 (B-ch)	PR-233 board ⊘RV121		

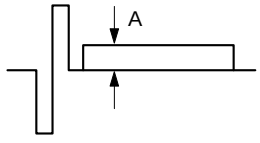
4-2-16. Rear-stage Fixed Gain-up Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 100 mV/div 5 µs/div	PR-233 board TP111 (G-ch)	PR-233 board ⊘RV103		 **A = 350 ±10 mV**
	PR-233 board TP112 (R-ch)	PR-233 board ⊘RV114		
	PR-233 board TP113 (B-ch)	PR-233 board ⊘RV122		

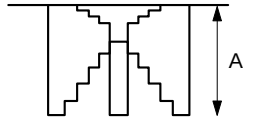
4-2-17. Black Tracking Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X5 H TWO LINE	CH1 (G out)	ADJ NO.13	Attach the lens cap	Adjust the black tracking so that the same black level is obtained when 0 dB and 12 dB of the menu page 1/3 GAIN are toggle-switched each other. 
	CH3 (R out)	ADJ NO.12		
	CH2 (B out)	ADJ NO.14		

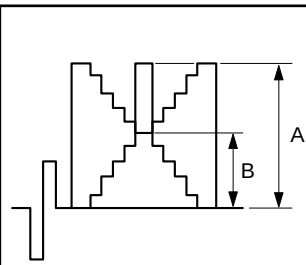
4-2-18. Blanking Cleaning Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X5 H TWO LINE	CH1 (G out)	ADJ NO.22	Menu PAGE 1/3 GAIN : 0 dB	 **A = 20 ±5 mV**
	CH3 (R out)	ADJ NO.32		
	CH2 (B out)	ADJ NO.42		

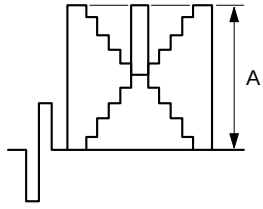
4-2-19. Gamma Off Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
Oscilloscope CH1 100 mV/div 5 µs/div	PR-233 board TP111 (G-ch)	PR-233 board ⊘RV103	Remove the lens cap	 **A = 350 ±10 mV**
	PR-233 board TP112 (R-ch)	PR-233 board ⊘RV114		
	PR-233 board TP113 (B-ch)	PR-233 board ⊘RV122		

4-2-20. Gamma Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification	
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	ADJ NO.21		B = 360 ±10 mV	
		ADJ NO.18		A = 740 ±10 mV	
		ADJ NO.21		B = 360 ±10 mV	
	CH3 (R out)	ADJ NO.31		B = 360 ±10 mV	
		ADJ NO.28		A = 740 ±10 mV	
		ADJ NO.31		B = 360 ±10 mV	
	CH2 (B out)	ADJ NO.41		B = 360 ±10 mV	
		ADJ NO.38		A = 740 ±10 mV	
		ADJ NO.41		B = 360 ±10 mV	

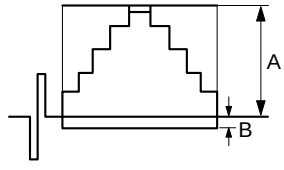
4-2-21. Knee Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	Lens iris		A = 800 ±20 mV
		ADJ NO.20		A = 740 ±10 mV
	CH3 (R out)	ADJ NO.30		
	CH2 (B out)	ADJ NO.40		

4-2-22. Matrix Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H THREE LINE	CH1 (G out) CH2 (B out) CH3 (R out)	PR-233 board ⊘RV104 ⊘RV115 ⊘RV123		1. Set the respective variable resistor to their mechanical center. 2. Set the MATRIX of the menu PAGE 2/3 to ON. Confirm that the white signal amplitude does not change when the MATRIX is turned on.

4-2-23. WC, BC Adjustment

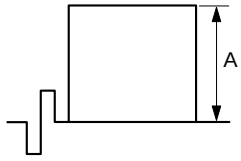
Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	ADJ NO.53	Lens iris : OPEN	
		ADJ NO.54	Menu PAGE 3/3 NEGA : ON After completion of adjustment NEGA : turn OFF.	**A = 810 ±10 mV** **B = −20 ±5 mV**

4-2-24. ABB Operation Check

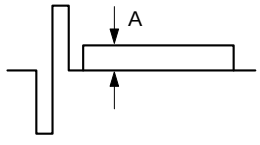
[Procedure]

1. Connect the iris cable of the lens to the camera.
2. Set the switch S804 of the TG-192 board to the OPE position.
3. Press the BLACK button on the rear panel and confirm that the automatic black adjustment is performed and the message “AUTO BLACK : OK” appears.
4. Set the switch S804 of the TG-192 board to the ADJ position.

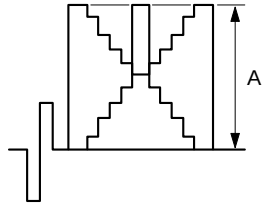
4-2-25. AE Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (Y out)	ADJ NO.81	Object : All white pattern (Attach the ND-4 filter.) Menu PAGE 3/3 GBR/YPbPr : YPbPr After completion of adjustment, return to GBR, and remove the iris cable and the ND-4 filter.	Auto iris works.  **A = 370 ±30 mV**

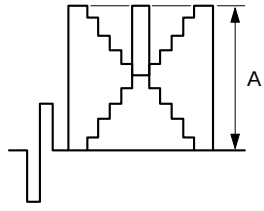
4-2-26. ABB Level Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X5 H TWO LINE	CH1 (G out)		Lens iris : Close “C”	1. Set the switch S804 of the TG-192 board to the OPE position. 2. Press the BLACK button on the rear panel and confirm that the automatic black adjustment is performed and the message “AUTO BLACK : ON” appears, and the black level (A) of G channel output is A = 20 ±5 mV.
	CH3 (R out)	ADJ NO.97		The difference between the black level of R channel output and that of G channel output must be 3 mV or less. *1
	CH2 (B out)	ADJ NO.98		The difference between the black level of B channel output and that of G channel output must be 3 mV or less. *1
				∗1: If the adjustment cannot be performed. 1. Set the switch S804 of the TG-192 board to the ADJ position. 2. When black level is higher than that of G channel output by 3 mV or more, decrease the data by “1”. When black level is lower than that of G channel output by 3 mV or more, increase the data by “1”. 3. Set the switch S804 of the TG-192 board to the OPE position and check the black level by pressing the BLACK button. 

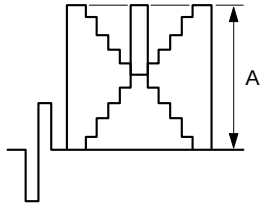
4-2-27. AWB Operation Range Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	Lens iris	Object : Gray scale chart Menu PAGE 2/3 WHT.BAL : AWB TG-192 board S804 : OPE After completion of adjustment return S804 to ADJ position.	A = 700 ±20 mV
	CH3 (R out) CH2 (B out)	–		Press the WHITE button on the rear panel and confirm that the message “AUTO WHITE : OK” appears and A = 700 ±20 mV.
	CH1 (G out)	Lens iris		A = 400 ±20 mV
		ADJ NO.83		Press the WHITE button on the rear panel and confirm that the message “AUTO WHITE : OK” appears and A = 700 ±20 mV. If the message “AUTO WHITE : NG” appears, set S804 on TG-192 board to ADJ, increase the EVR data, return S804 on TG-192 board to OPE and check again.
	CH1 (G out)	Lens iris		A = 200 ±20 mV
		ADJ NO.83		Press the WHITE button on the rear panel and confirm that the message “AUTO WHITE : NG” appears. If the message “AUTO WHITE : OK” appears, set S804 on TG-192 board to ADJ, decrease the EVR data, return S804 on TG-192 board to OPE and check again. 

4-2-28. ATW Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	Lens iris	Menu PAGE 2/3 WHT.BAL : ATW	 **A = 600 ±10 mV**
	CH3 (R out)	ADJ NO.91		
	CH2 (B out)	ADJ NO.92		

4-2-29. ATW Operation Range Adjustment

Measuring equipment	Measuring point	Adjustment point	Mode	Specification
WFM INPUT : A-CH V FILTER, X1 H TWO LINE	CH1 (G out)	Lens iris	Menu PAGE 2/3 WHT.BAL : ATW After completion of adjustment, return WHT.BAL to AWB.	A = 400 ±20 mV
	CH2 (B out) CH3 (R out)	ADJ NO.90		Confirm that ATW works and signal amplitude converges to A = 400 ±20 mV. If ATW does not work, decrease the EVR data and check again.
	CH1 (G out)	Lens iris		A = 200 ±10 mV
	CH2 (B out) CH3 (R out)	ADJ NO.90		Confirm that ATW does not work. If ATW works, increase the EVR data and check again. 

∗ Use the color temperature conversion filter as necessitated for the ATW check.

SECTION 5
SPARE PARTS

5-1. NOTES ON REPAIR PARTS

(1) Safety Related Components Warning
Components marked ⚠ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

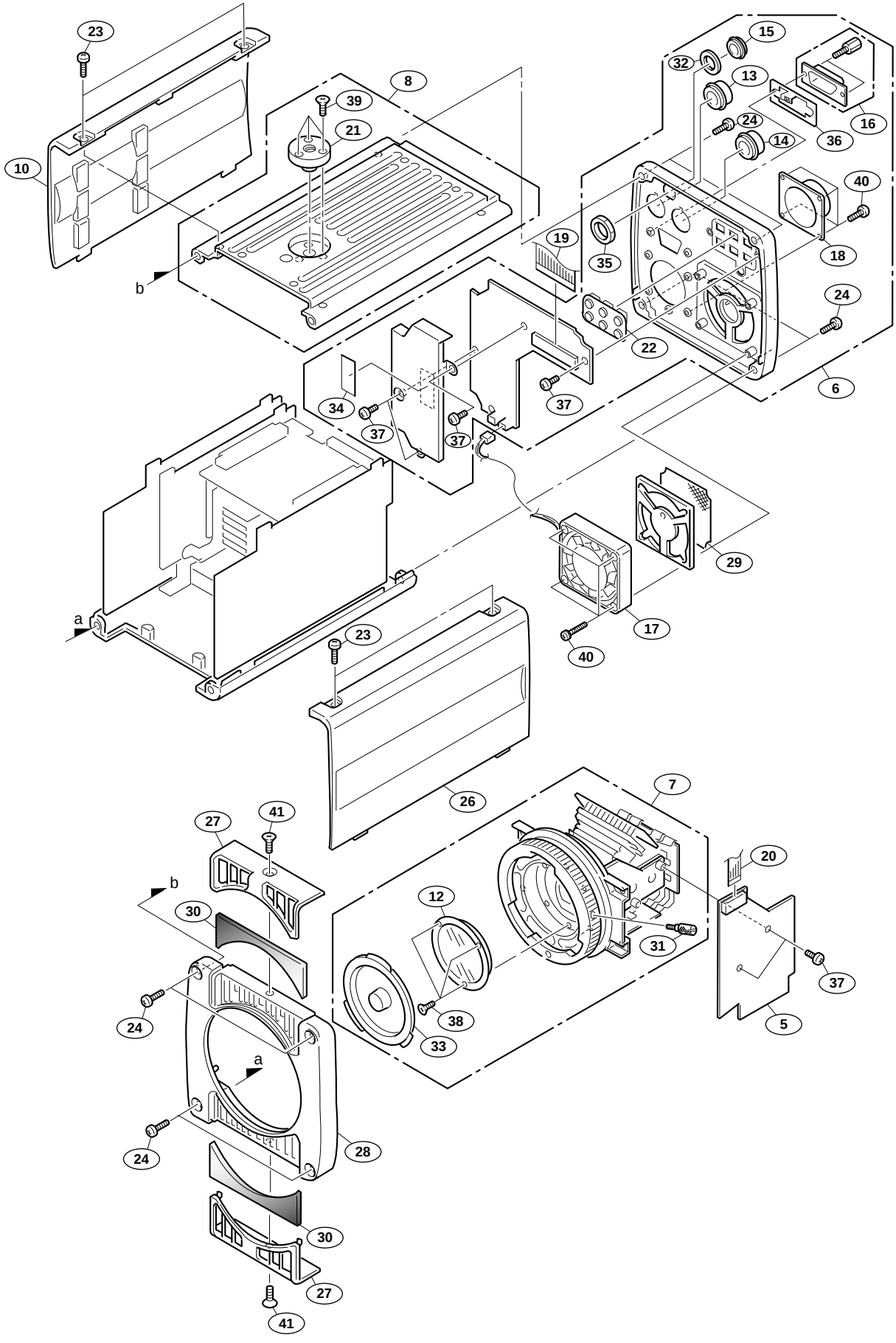
(2) Standardization of Parts
Repair parts supplied from Sony Parts Center may not be always identical with the parts which actually in use due to “accommodating the improved parts and/or engineering changes” or “standardization of genuine parts”.
This manual’s exploded views and electrical spare parts list are indicating the part numbers of “the standardized genuine parts at present” .

(3) Stock of Parts
Parts marked with “o” SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with “o” will be processed, but allow for additional delivery time.

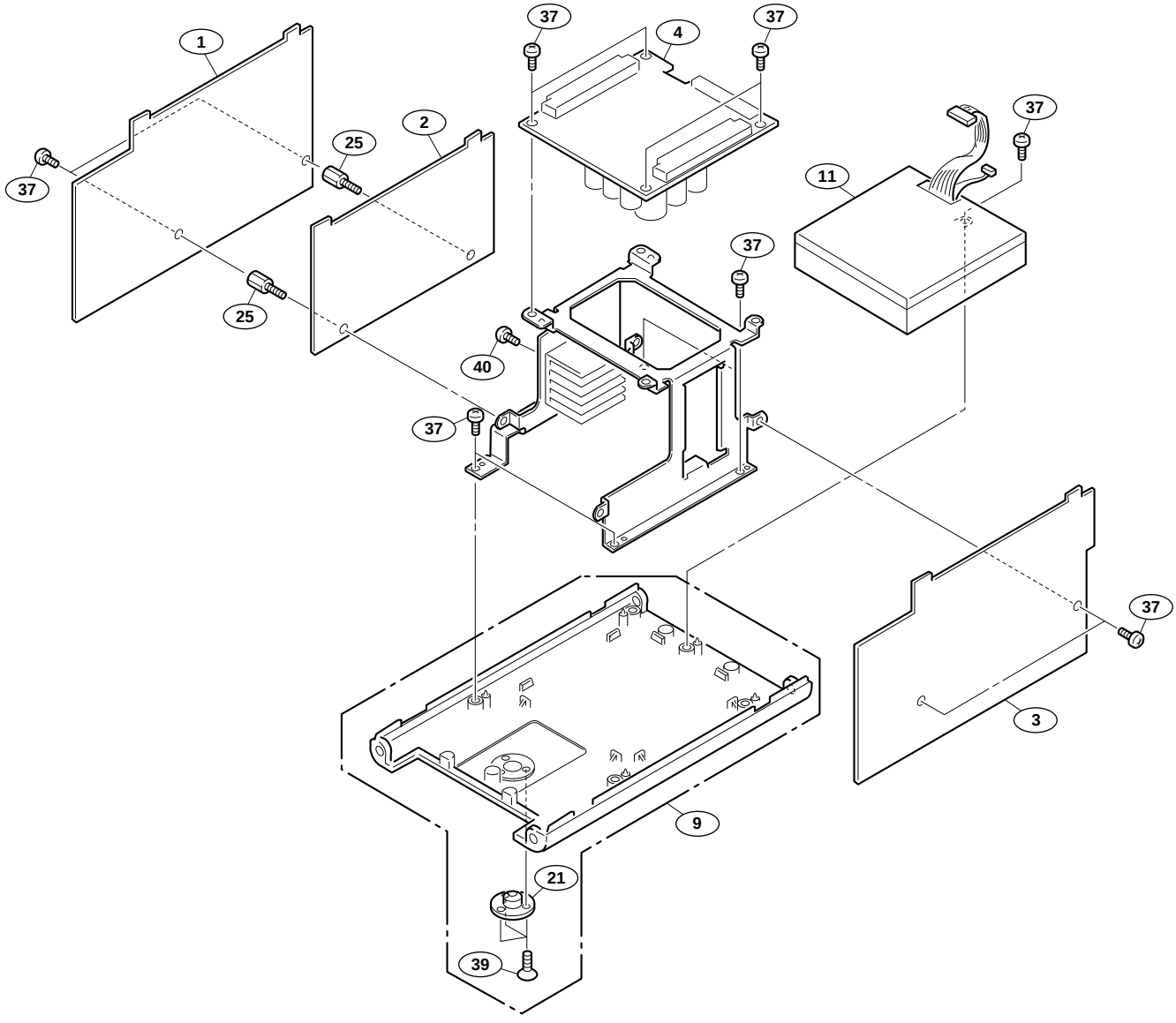
(4) Units for Capacitors, Inductors and Resistors
The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified.

Capacitors	:	μF
Inductors	:	μH
Resistors	:	Ω

5-2. EXPLODED VIEWS



http://getMANUAL.com



No.	Part No.	SP	Description
1	A-8318-107-A	o	MOUNTED CIRCUIT BOARD, PR-233
2	A-8318-109-A	o	MOUNTED CIRCUIT BOARD, IE-55
3	A-8318-111-A	o	MOUNTED CIRCUIT BOARD, TG-192
4	A-8318-113-A	o	MOUNTED CIRCUIT BOARD, MB-758
5	A-8318-116-A	o	MOUNTED CIRCUIT BOARD, DR-351
6	A-8318-121-A	s	PANEL SUB ASSY, REAR
7	A-8318-122-A	s	CHU ASSY
8	X-3604-540-1	o	CASE ASSY,UPPER
9	X-3604-542-1	o	CASE ASSY,LOWER
10	X-3604-544-1	o	PANEL(L) ASSY,SIDE
11	1-475-718-11	s	TRANSFORMER, DC-DC CONVERTER
12	1-547-312-11	s	FILTER UNIT, FRONT
13	1-562-221-31	s	CONNECTOR (ROUND TYPE)(R-F)12P
14	1-562-381-00	s	CONNECTOR, ROUND TYPE 12P
15	1-569-084-12	s	SOCKET, SYNCHRONIZE
16	1-580-090-11	s	SOCKET, D-SUB CONNECTOR 9P
17	1-763-099-11	s	FAN, DC
18	1-766-566-11	o	CONNECTOR, ROUND TYPE (M)(26P)
19	1-783-380-11	o	CABLE, FLEXIBLE FLAT (50 CORE)
20	1-783-381-11	o	CABLE, FLEXIBLE FLAT (40 CORE)
21	3-174-664-02	s	SCREW, TRIPOD
22	3-174-672-01	o	SHEET, REAR
23	3-184-550-01	s	SCREW, +B 2.6 NI
24	3-184-550-11	s	SCREW, +B 2.6 NI
25	3-612-579-01	o	SPACER,PWB
26	3-612-587-01	o	PANEL,SIDE
27	3-612-589-01	o	COVER,INTAKE
28	3-612-590-01	o	PANEL,FRONT
29	3-612-599-01	o	GRILLE,FAN
30	3-613-641-01	s	FILTER
31	3-678-629-00	s	LEVER, MOUNT
32	3-694-152-01	o	SPACER
33	3-699-048-01	s	CAP, MOUNT
34	3-703-044-26	o	LABEL, CAUTION
35	3-712-653-01	s	NUT (M8), TUBE
36	3-737-536-03	o	LUG, GROUND, CONNECTOR
37	7-621-772-18	s	SCREW +B 2X4
38	7-627-452-18	s	SCREW,PRECISION +K 2X3
39	7-627-454-37	s	SCREW, PRECISION +K 2.6X5
40	7-682-148-13	s	SCREW +P 3X8
41	7-682-347-09	s	SCREW +RK 3X6

5-3. ELECTRICAL PARTS LIST

BI-124 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
C1	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C2	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C3	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C4	1-107-690-11	s	TANTALUM, CHIP 6.8uF 20% 35V
C5	1-107-690-11	s	TANTALUM, CHIP 6.8uF 20% 35V
C7	1-113-991-11	s	TANTALUM 33uF 20% 16V
C8	1-162-916-11	s	CERAMIC, CHIP 12PF 5% 50V
C9	1-113-991-11	s	TANTALUM 33uF 20% 16V
C10	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C11	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C12	1-113-981-11	s	TANTALUM, CHIP 22uF 20% 20V
C13	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C14	1-111-253-11	s	TANTALUM, CHIP 100uF 20% 6.3V
C15	1-113-991-11	s	TANTALUM 33uF 20% 16V
C16	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C17	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C18	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C19	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C20	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C21	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C22	1-107-690-11	s	TANTALUM, CHIP 6.8uF 20% 35V
C23	1-107-690-11	s	TANTALUM, CHIP 6.8uF 20% 35V
C25	1-113-991-11	s	TANTALUM 33uF 20% 16V
C26	1-162-916-11	s	CERAMIC, CHIP 12PF 5% 50V
C27	1-113-991-11	s	TANTALUM 33uF 20% 16V
C28	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C29	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C30	1-113-981-11	s	TANTALUM, CHIP 22uF 20% 20V
C31	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C32	1-111-253-11	s	TANTALUM, CHIP 100uF 20% 6.3V
C33	1-113-991-11	s	TANTALUM 33uF 20% 16V
C34	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C35	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C36	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C37	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C38	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C39	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C40	1-107-690-11	s	TANTALUM, CHIP 6.8uF 20% 35V
C41	1-107-690-11	s	TANTALUM, CHIP 6.8uF 20% 35V
C43	1-113-991-11	s	TANTALUM 33uF 20% 16V
C44	1-162-916-11	s	CERAMIC, CHIP 12PF 5% 50V
C45	1-113-991-11	s	TANTALUM 33uF 20% 16V
C46	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C47	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C48	1-113-981-11	s	TANTALUM, CHIP 22uF 20% 20V
C49	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C50	1-111-253-11	s	TANTALUM, CHIP 100uF 20% 6.3V
C51	1-113-991-11	s	TANTALUM 33uF 20% 16V
C52	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C53	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C54	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C55	1-117-205-11	s	TANTALUM, CHIP 3.3uF 20% 50V
C56	1-117-205-11	s	TANTALUM, CHIP 3.3uF 20% 50V
C57	1-117-205-11	s	TANTALUM, CHIP 3.3uF 20% 50V
C58	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C59	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C60	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
D1	8-719-023-31	s	DIODE MA720

(BI-124 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D3	8-719-047-39	s	DIODE MA717-TX
D4	8-719-023-31	s	DIODE MA720
D6	8-719-047-39	s	DIODE MA717-TX
D7	8-719-023-31	s	DIODE MA720
D9	8-719-047-39	s	DIODE MA717-TX
D10	8-719-047-39	s	DIODE MA717-TX
D11	8-719-047-39	s	DIODE MA717-TX
D12	8-719-047-39	s	DIODE MA717-TX
Q1	8-729-429-44	s	TRANSISTOR XP1501
Q2	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q3	8-729-427-70	s	TRANSISTOR XP4401
Q4	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q5	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q6	8-729-429-44	s	TRANSISTOR XP1501
Q7	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q8	8-729-427-70	s	TRANSISTOR XP4401
Q9	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q10	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q11	8-729-429-44	s	TRANSISTOR XP1501
Q12	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q13	8-729-427-70	s	TRANSISTOR XP4401
Q14	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q15	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q16	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q17	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q18	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
R1	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R2	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R3	1-218-907-11	s	RES, CHIP 330K 0.50% 1/16W
R4	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R5	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R6	1-218-885-11	s	RES, CHIP 39K 0.50% 1/16W
R7	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R8	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R9	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R10	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R11	1-216-813-11	s	METAL, CHIP 220 5% 1/16W
R12	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R13	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R14	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R15	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R16	1-218-869-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R17	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R18	1-218-862-11	s	RES, CHIP 4.3K 0.50% 1/16W
R19	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R20	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R21	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R22	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R23	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R24	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R25	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R26	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R27	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R28	1-218-907-11	s	RES, CHIP 330K 0.50% 1/16W
R29	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R30	1-218-885-11	s	RES, CHIP 39K 0.50% 1/16W
R31	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R32	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W

(BI-124 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R33	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R34	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R35	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R36	1-216-813-11	s	METAL, CHIP 220 5% 1/16W
R37	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R38	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R39	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R40	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R41	1-218-869-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R42	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R43	1-218-862-11	s	RES, CHIP 4.3K 0.50% 1/16W
R44	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R45	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R46	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R47	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R48	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R49	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R50	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R51	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R52	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R53	1-218-907-11	s	RES, CHIP 330K 0.50% 1/16W
R54	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R55	1-218-885-11	s	RES, CHIP 39K 0.50% 1/16W
R56	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R57	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R58	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R59	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R60	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R61	1-216-813-11	s	METAL, CHIP 220 5% 1/16W
R62	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R63	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R64	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R65	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R66	1-218-869-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R67	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R68	1-218-862-11	s	RES, CHIP 4.3K 0.50% 1/16W
R69	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R70	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R71	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R72	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R73	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R74	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R75	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R76	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R77	1-211-977-11	s	METAL, CHIP 22 0.5%1/16W
R78	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R80	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R81	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R82	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R83	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R84	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R85	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R86	1-211-977-11	s	METAL, CHIP 22 0.5%1/16W
R87	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R88	1-211-977-11	s	METAL, CHIP 22 0.5%1/16W
R89	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R90	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R91	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R92	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W

(BI-124 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R93	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R94	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R95	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R96	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R97	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R98	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R99	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R100	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W

CN-1494 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
C1202	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1203	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1207	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1208	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1209	1-107-689-21	s	TANTALUM, CHIP 1uF 10% 35V
C1210	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1211	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C1212	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1213	1-107-687-11	s	TANTALUM, CHIP 3.3uF 20% 20V
C1214	1-113-985-11	s	TANTALUM, CHIP 10uF 20% 20V
C1216	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1217	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1218	1-113-985-11	s	TANTALUM, CHIP 10uF 20% 20V
C1219	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1220	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
CN1201	1-564-704-11	o	PIN, CONNECTOR 2P
CN1202	1-506-467-11	s	CONNECTOR, 2P, MALE
CN1203	1-784-697-11	o	CONNECTOR, FFC/FPC (ZIF) 50P
D1201	8-719-159-85	s	DIODE RD2.0MB
D1202	8-719-159-85	s	DIODE RD2.0MB
D1203	8-719-047-40	s	DIODE MA737-TX
D1204	8-719-157-54	s	DIODE RD12M-B
D1205	8-719-123-76	s	THYRISTOR 03P4J
D1206	8-719-800-76	s	DIODE 1SS226
F1201	⚠1-533-266-11	s	FUSE, CHIP 3.15A 125V
F1202	⚠1-576-220-21	s	FUSE, CHIP 0.8A 125V
FL1206	1-234-066-11	s	FILTER, CHIP EMI
FL1207	1-234-066-11	s	FILTER, CHIP EMI
FL1208	1-234-066-11	s	FILTER, CHIP EMI
FL1209	1-239-901-21	s	FILETR, CHIP EMI
FL1210	1-239-901-21	s	FILETR, CHIP EMI
FL1211	1-239-901-21	s	FILETR, CHIP EMI
IC1201	8-759-399-90	s	IC QS3257Q-T
L1202	1-412-031-11	s	INDUCTOR, CHIP 47uH
L1203	1-412-031-11	s	INDUCTOR, CHIP 47uH
L1204	1-412-029-11	s	INDUCTOR, CHIP 10uH
L1205	1-412-029-11	s	INDUCTOR, CHIP 10uH
L1206	1-406-864-21	s	COIL CHOKE
L1207	1-406-864-21	s	COIL CHOKE
Q1201	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1203	8-729-103-72	s	TRANSISTOR 2SD1005-BV
Q1204	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1205	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1206	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1207	8-729-103-72	s	TRANSISTOR 2SD1005-BV
Q1208	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1209	8-729-429-63	s	TRANSISTOR 2SC4656-Q
R1203	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1204	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1205	1-216-822-11	s	METAL, CHIP 1.2K 5% 1/16W
R1206	1-216-839-11	s	METAL, CHIP 33K 5% 1/16W
R1207	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1208	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1209	1-208-762-11	s	METAL,CHIP 270K 0.50% 1/10W
R1210	1-208-762-11	s	METAL,CHIP 270K 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R1212	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1213	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1214	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1215	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R1216	1-218-878-11	s	METAL, CHIP 20K 0.50% 1/16W
R1217	1-218-856-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R1218	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1219	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R1221	1-216-843-11	s	METAL, CHIP 68K 5% 1/16W
R1222	1-216-835-11	s	METAL, CHIP 15K 5% 1/16W
R1223	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R1224	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1225	1-216-834-11	s	METAL, CHIP 12K 5% 1/16W
R1226	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R1227	1-216-840-11	s	METAL, CHIP 39K 5% 1/16W
R1229	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1230	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1231	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1232	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1233	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1234	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1235	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1236	1-208-754-11	s	RES, CHIP 68 0.50% 1/10W
R1237	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1238	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1239	1-208-762-11	s	METAL,CHIP 270K 0.50% 1/10W
R1240	1-208-762-11	s	METAL,CHIP 270K 0.50% 1/10W
R1241	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1242	1-216-817-11	s	METAL, CHIP 470 5% 1/16W
R1244	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
S1201	1-571-787-31	s	SWITCH, PUSH
S1202	1-571-787-31	s	SWITCH, PUSH
S1203	1-571-787-31	s	SWITCH, PUSH
S1204	1-571-787-31	s	SWITCH, PUSH
S1205	1-571-787-31	s	SWITCH, PUSH
S1206	1-571-787-31	s	SWITCH, PUSH
S1207	1-571-304-11	s	SWITCH, CHIP

DR-351 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8318-116-A	o	MOUNTED CIRCUIT BOARD, DR-351
C1001	1-117-205-11	s	TANTALUM, CHIP 3.3uF 20% 50V
C1002	1-113-985-11	s	TANTALUM, CHIP 10uF 20% 20V
C1003	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1004	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1005	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1006	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V
C1007	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C1008	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C1009	1-164-315-11	s	CERAMIC, CHIP 470PF 5% 50V
C1010	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C1011	1-117-205-11	s	TANTALUM, CHIP 3.3uF 20% 50V
C1021	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1022	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V
C1023	1-162-926-11	s	CERAMIC, CHIP 82PF 5% 50V
C1024	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1026	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1027	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V
C1028	1-162-926-11	s	CERAMIC, CHIP 82PF 5% 50V
C1029	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1031	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1032	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V
C1033	1-162-926-11	s	CERAMIC, CHIP 82PF 5% 50V
C1034	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1036	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1037	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V
C1038	1-162-926-11	s	CERAMIC, CHIP 82PF 5% 50V
C1039	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1041	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1042	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V
C1043	1-162-926-11	s	CERAMIC, CHIP 82PF 5% 50V
C1044	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1046	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1047	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V
C1048	1-162-926-11	s	CERAMIC, CHIP 82PF 5% 50V
C1049	1-113-991-11	s	TANTALUM 33uF 20% 16V
C1050	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1051	1-164-227-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1052	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C1053	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C1054	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1055	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1056	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1057	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1058	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1059	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
CN1001	1-784-696-11	o	CONNECTOR, FFC/FPC (ZIF) 40P
CN1002	1-784-694-11	o	CONNECTOR, FFC/FPC (ZIF) 18P
CN1003	1-784-694-11	o	CONNECTOR, FFC/FPC (ZIF) 18P
CN1004	1-784-694-11	o	CONNECTOR, FFC/FPC (ZIF) 18P
D1001	8-719-059-51	s	DIODE MA3J142E0LSO
D1002	8-719-059-51	s	DIODE MA3J142E0LSO
D1007	8-719-047-39	s	DIODE MA717-TX
D1008	8-719-047-39	s	DIODE MA717-TX
D1009	8-719-047-39	s	DIODE MA717-TX
D1010	8-719-047-39	s	DIODE MA717-TX
D1011	8-719-047-39	s	DIODE MA717-TX
D1012	8-719-047-39	s	DIODE MA717-TX

(DR-351 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D1013	8-719-047-39	s	DIODE MA717-TX
D1014	8-719-047-39	s	DIODE MA717-TX
D1015	8-719-047-39	s	DIODE MA717-TX
D1016	8-719-047-39	s	DIODE MA717-TX
D1017	8-719-047-39	s	DIODE MA717-TX
D1018	8-719-047-39	s	DIODE MA717-TX
IC1001	8-759-523-08	s	IC TC74AC08FT(EL)
Q1001	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q1002	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q1003	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1004	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1005	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1006	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1015	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1016	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1017	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1018	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1019	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1020	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1021	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1022	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1023	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1024	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1025	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1026	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1027	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1028	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1029	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1030	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1031	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1032	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1033	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1034	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1035	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1036	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1037	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1038	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1039	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1040	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1041	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1042	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1043	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1044	8-729-143-43	s	TRANSISTOR 2SA1463IK
Q1045	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1046	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1047	8-729-112-65	s	TRANSISTOR 2SA1462-Y33
Q1048	8-729-140-47	s	TRANSISTOR 2SC3735-T2B-B35
Q1049	8-729-145-18	s	TRANSISTOR 2SC3736-0K
Q1050	8-729-143-43	s	TRANSISTOR 2SA1463IK
R1001	1-216-815-11	s	METAL, CHIP 330 5% 1/16W
R1002	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R1003	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R1004	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R1005	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R1016	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R1017	1-216-019-00	s	METAL, CHIP 56 5% 1/10W
R1018	1-216-806-11	s	METAL, CHIP 56 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R1019	1-216-019-00	s	METAL, CHIP 56 5% 1/10W
R1020	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R1021	1-216-019-00	s	METAL, CHIP 56 5% 1/10W
R1022	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R1023	1-216-019-00	s	METAL, CHIP 56 5% 1/10W
R1024	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R1025	1-216-019-00	s	METAL, CHIP 56 5% 1/10W
R1026	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R1027	1-216-019-00	s	METAL, CHIP 56 5% 1/10W
R1028	1-216-845-11	o	METAL, CHIP 100K 5% 1/16W
R1029	1-216-845-11	o	METAL, CHIP 100K 5% 1/16W
R1030	1-216-845-11	o	METAL, CHIP 100K 5% 1/16W

IE-55 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8318-109-A	o	MOUNTED CIRCUIT BOARD, IE-55
C1301	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1303	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1305	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1306	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1307	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1308	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1309	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1310	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1311	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1312	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1313	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1314	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1315	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1316	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1317	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1318	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1319	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1320	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1321	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1326	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1330	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1331	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1332	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C1333	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1334	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1335	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1336	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1337	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1338	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1339	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1340	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1341	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1342	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1343	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1347	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1348	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1349	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1350	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1351	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1352	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1353	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1354	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1355	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1356	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1357	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1358	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1359	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1360	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1361	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1362	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1363	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1364	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1365	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1366	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1367	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1368	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1369	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V

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Ref. No. or Q'ty	Part No.	SP	Description
C1370	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1371	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1372	1-107-826-11	s	CERAMIC, CHIP 0.01uF 1% 16V
C1373	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1374	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1375	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1376	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1377	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1378	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1379	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1380	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1381	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1382	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1383	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1384	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1385	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1386	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1387	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1388	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1389	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C1390	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1391	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1393	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1394	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C1395	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1396	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1398	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1399	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1400	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1402	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1403	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1404	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C1405	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1407	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1408	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1409	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1410	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1411	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1412	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1413	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C1415	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1416	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1417	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C1418	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1419	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1421	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1422	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1423	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1424	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1425	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1426	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1427	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1428	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1429	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1430	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1431	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1432	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1433	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1434	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C1435	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1436	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1437	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1438	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1439	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1440	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1441	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C1442	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1443	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1444	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1445	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1446	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1447	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1448	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1449	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1450	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1451	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1452	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1453	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1454	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1455	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1456	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1457	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1458	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1459	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1460	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1461	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1462	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1463	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1464	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1466	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1467	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1468	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1470	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1471	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1473	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1474	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C1478	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C1479	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1480	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1481	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1482	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1483	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1484	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1485	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1486	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1487	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1488	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1489	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1490	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C1491	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C1492	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C1493	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C1494	1-107-826-11	s	CERAMIC, CHIP0.1uF 10% 16V
C1495	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C1496	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C1497	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C1498	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C1499	1-162-924-11	s	CERAMIC, CHIP 56PF 5% 50V

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Ref. No. or Q'ty	Part No.	SP	Description
D1301	8-719-047-39	s	DIODE MA717-TX
D1302	8-719-047-39	s	DIODE MA717-TX
D1303	8-719-047-39	s	DIODE MA717-TX
FL1301	1-233-943-11	s	FILTER, LOW-PASS
FL1302	1-233-943-11	s	FILTER, LOW-PASS
FL1303	1-233-943-11	s	FILTER, LOW-PASS
FL1304	1-233-943-11	s	FILTER, LOW-PASS
FL1305	1-233-943-11	s	FILTER, LOW-PASS
FL1306	1-233-943-11	s	FILTER, LOW-PASS
IC1301	8-759-175-02	s	IC TL074CPW
IC1303	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC1304	8-752-371-18	s	IC CXD2302Q
IC1305	8-752-371-18	s	IC CXD2302Q
IC1306	8-752-338-45	s	IC CXK1202Q
IC1307	8-752-338-45	s	IC CXK1202Q
IC1308	8-752-338-45	s	IC CXK1202Q
IC1309	8-759-523-11	s	IC TC74AC74FT(EL)
IC1310	8-759-488-51	s	IC CXD8644R
IC1311	8-759-523-05	s	IC TC74AC00FT(EL)
IC1312	8-759-488-49	s	IC CXD8642R
IC1313	8-759-635-27	s	IC M62352GP-E1
IC1314	8-759-710-88	s	IC NJM431U
IC1315	8-752-371-18	s	IC CXD2302Q
IC1316	8-752-371-18	s	IC CXD2302Q
IC1317	8-752-338-45	s	IC CXK1202Q
IC1318	8-752-338-45	s	IC CXK1202Q
IC1319	8-759-488-51	s	IC CXD8644R
IC1320	8-752-371-18	s	IC CXD2302Q
IC1321	8-752-371-18	s	IC CXD2302Q
IC1322	8-752-338-45	s	IC CXK1202Q
IC1323	8-752-338-45	s	IC CXK1202Q
IC1324	8-759-488-51	s	IC CXD8644R
IC1325	8-752-334-64	s	IC CXD1171M
IC1326	8-752-356-44	s	IC CXD2306Q
IC1327	8-752-356-44	s	IC CXD2306Q
IC1328	8-752-356-44	s	IC CXD2306Q
IC1330	8-759-523-05	s	IC TC74AC00FT(EL)
IC1331	8-759-359-66	s	IC TL082CPW-E05
IC1332	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC1333	8-759-493-32	s	IC EL2270CS-TE2
IC1334	8-759-082-61	s	IC TC4W53FU
IC1335	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC1336	8-759-493-32	s	IC EL2270CS-TE2
IC1337	8-759-359-66	s	IC TL082CPW-E05
IC1338	8-759-493-32	s	IC EL2270CS-TE2
IC1339	8-759-082-61	s	IC TC4W53FU
IC1340	8-759-493-32	s	IC EL2270CS-TE2
IC1341	8-759-359-66	s	IC TL082CPW-E05
IC1342	8-759-493-32	s	IC EL2270CS-TE2
IC1343	8-759-082-61	s	IC TC4W53FU
IC1344	8-759-493-32	s	IC EL2270CS-TE2
IC1345	8-759-493-31	s	IC EL2170CW-TE2
IC1346	8-759-493-31	s	IC EL2170CW-TE2
IC1347	8-759-493-31	s	IC EL2170CW-TE2
IC1348	8-759-493-31	s	IC EL2170CW-TE2
IC1349	8-759-082-61	s	IC TC4W53FU

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Ref. No. or Q'ty	Part No.	SP	Description
L1301	1-412-390-21	s	INDUCTOR CHIP 0uH
L1302	1-412-390-21	s	INDUCTOR CHIP 0uH
L1303	1-412-390-21	s	INDUCTOR CHIP 0uH
L1304	1-412-390-21	s	INDUCTOR CHIP 0uH
L1305	1-412-390-21	s	INDUCTOR CHIP 0uH
L1306	1-412-390-21	s	INDUCTOR CHIP 0uH
L1307	1-412-390-21	s	INDUCTOR CHIP 0uH
Q1301	8-729-120-22	s	TRANSISTOR 2SD1614-T1XK
Q1302	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1303	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1304	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1305	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1306	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1307	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1308	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1309	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1310	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1311	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1312	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1313	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1314	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1315	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1316	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1317	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1318	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1319	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1320	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q1321	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1322	8-729-429-63	s	TRANSISTOR 2SC4656-Q
Q1323	8-729-429-67	s	TRANSISTOR 2SA1791-Q
R1301	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1302	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1304	1-218-845-11	s	METAL, CHIP 820 0.50% 1/16W
R1305	1-211-987-11	s	METAL, CHIP 56 0.50% 1/16W
R1306	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1307	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R1308	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1309	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R1312	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1313	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1314	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1315	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1316	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1317	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1318	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1320	1-218-845-11	s	METAL, CHIP 820 0.50% 1/16W
R1321	1-211-987-11	s	METAL, CHIP 56 0.50% 1/16W
R1322	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1323	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R1324	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1325	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R1326	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1327	1-218-841-11	s	METAL, CHIP 560 0.50% 1/16W
R1328	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1329	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1330	1-211-969-11	s	METAL, CHIP 10 0.50% 1/16W
R1331	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1334	1-216-864-11	s	METAL, CHIP 0 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R1335	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1336	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1337	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1339	1-218-845-11	s	METAL, CHIP 820 0.50% 1/16W
R1340	1-211-987-11	s	METAL, CHIP 56 0.50% 1/16W
R1341	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1342	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R1343	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1344	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R1347	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1348	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1349	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R1351	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R1352	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R1353	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R1354	1-218-869-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R1355	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1357	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R1358	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R1359	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R1360	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1361	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1362	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1364	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R1365	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R1369	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1371	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R1372	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R1376	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1377	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1378	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1379	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1380	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1381	1-218-864-11	s	METAL, CHIP 0 5% 1/16W
R1382	1-218-864-11	s	METAL, CHIP 0 5% 1/16W
R1383	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1384	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R1385	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1386	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R1387	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R1388	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1389	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R1390	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R1391	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1393	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R1394	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R1395	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1396	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1397	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1398	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1399	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1400	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1401	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1402	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1403	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R1404	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R1405	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R1406	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R1407	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R1408	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1409	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1410	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R1411	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1412	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1413	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1415	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R1416	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R1417	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1418	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R1419	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1420	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1421	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1422	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1423	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1424	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1425	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1426	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R1427	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R1428	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R1429	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R1430	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1431	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1432	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1433	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R1434	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1435	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1436	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1438	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R1439	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R1440	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1441	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R1442	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1443	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1444	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1445	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1446	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1447	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1448	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1449	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R1450	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R1451	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R1452	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R1453	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1454	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R1455	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1456	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R1457	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1458	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1459	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1460	1-211-991-11	s	METAL, CHIP 82 0.50% 1/16W
R1461	1-211-991-11	s	METAL, CHIP 82 0.50% 1/16W
R1462	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1463	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1464	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1465	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R1466	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1467	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1468	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W

(IE-55 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1469	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1470	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R1471	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1472	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1473	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1474	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1475	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1476	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1477	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R1478	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R1479	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1480	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1481	1-218-847-11	s	RES, CHIP 1K 0.5% 1/16W
R1482	1-218-837-11	s	RES, CHIP 390 0.5% 1/16W
R1483	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1484	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1485	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1486	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1487	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1488	1-216-857-11	s	RES, CHIP 1M 5% 1/16W
R1489	1-218-847-11	s	RES, CHIP 1K 0.5% 1/16W
R1490	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R1491	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1492	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R1493	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R1494	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R1495	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W

MB-758 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A8318-113-A	o	MOUNTED CIRCUIT BOARD, MB-758
C1101	1-115-733-11	s	ELECT 470uF 20% 10V
C1102	1-115-733-11	s	ELECT 470uF 20% 10V
C1103	1-115-785-11	s	ELECT 470uF 20% 25V
C1104	1-115-710-11	s	ELECT 0.001F 20% 6.3V
C1105	1-115-733-11	s	ELECT 470uF 20% 10V
C1106	1-115-733-11	s	ELECT 470uF 20% 10V
C1107	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1108	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1109	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1110	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1111	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1112	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1113	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1114	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1115	1-115-785-11	s	ELECT 470uF 20% 25V
C1116	1-115-733-11	s	ELECT 470uF 20% 10V
C1117	1-115-733-11	s	ELECT 470uF 20% 10V
C1118	1-115-832-11	s	ELECT 100uF 20% 50V
C1119	1-115-785-11	s	ELECT 470uF 20% 25V
C1120	1-115-741-11	s	ELECT 0.0022F 20% 10V
C1121	1-115-710-11	s	ELECT 0.001F 20% 6.3V
C1122	1-115-741-11	s	ELECT 0.0022F 20% 10V
C1123	1-115-710-11	s	ELECT 0.001F 20% 6.3V
CN1102	1-564-725-11	o	PIN, CONNECTOR (SMALL TYPE) 9P
CN1103	1-784-697-11	o	CONNECTOR, FFC/FPC (ZIF) 50P
L1101	1-424-643-11	s	COIL, CHOKE 10UH
L1102	1-424-643-11	s	COIL, CHOKE 10UH
L1103	1-424-643-11	s	COIL, CHOKE 10UH
L1104	1-424-643-11	s	COIL, CHOKE 10UH
L1105	1-424-643-11	s	COIL, CHOKE 10UH
L1106	1-424-643-11	s	COIL, CHOKE 10UH
L1107	1-424-643-11	s	COIL, CHOKE 10UH
L1108	1-424-643-11	s	COIL, CHOKE 10UH
L1109	1-424-643-11	s	COIL, CHOKE 10UH
L1110	1-424-643-11	s	COIL, CHOKE 10UH
L1111	1-424-643-11	s	COIL, CHOKE 10UH
L1112	1-424-643-11	s	COIL, CHOKE 10UH
L1113	1-424-643-11	s	COIL, CHOKE 10UH
L1114	1-424-643-11	s	COIL, CHOKE 10UH
L1115	1-424-643-11	s	COIL, CHOKE 10UH

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PR-233 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8318-107-A	o	MOUNTED CIRCUIT BOARD, PR-233
C101	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C102	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C103	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C104	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C105	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C106	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C107	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C108	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C112	1-115-581-11	s	TANTALUM, CHIP 100uF 20% 16V
C113	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C114	1-113-500-11	s	TANTALUM, CHIP 100uF 20% 10V
C115	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C116	1-113-500-11	s	TANTALUM, CHIP 100uF 20% 10V
C117	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C118	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C119	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C120	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C121	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C122	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C123	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C124	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C125	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C126	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C127	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 16V
C128	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C129	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C130	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C131	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C132	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C134	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C135	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C136	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C137	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C138	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C139	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C140	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C141	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C142	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C151	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C153	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C154	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C155	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C156	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C157	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C161	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C162	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C163	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C164	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C167	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C168	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C172	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C173	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C174	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C175	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C176	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C177	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C178	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V

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Ref. No. or Q'ty	Part No.	SP	Description
C179	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C180	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C181	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C182	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C183	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C186	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C187	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C188	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C189	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C190	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C191	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C192	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C193	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C194	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C195	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C196	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C197	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C198	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C199	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C200	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C201	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C202	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C206	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C207	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C208	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C214	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C215	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C216	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C220	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C221	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C222	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C223	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C224	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C225	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C227	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C228	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C229	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C230	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C231	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C232	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C233	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C234	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C235	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C236	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C237	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C238	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C242	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C243	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C244	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C245	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C246	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C247	1-162-918-11	s	CERAMIC, CHIP 18PF 5% 50V
C248	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C249	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C250	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C251	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C252	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C253	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C254	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C255	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C257	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C258	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C259	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C260	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C261	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C262	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C263	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C264	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C265	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C274	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C276	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C277	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C278	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C279	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C283	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C284	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C285	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C286	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C289	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C290	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C294	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C295	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C296	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C297	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C298	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C299	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C300	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C301	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C302	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C303	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C304	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C305	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C308	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C309	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C310	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C311	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C312	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C313	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C314	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C315	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C316	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C317	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C318	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C319	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C320	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C321	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C322	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C323	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C324	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C325	1-162-970-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C326	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C327	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C328	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C329	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C330	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C331	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C332	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C333	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C337	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C338	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C339	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C340	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C341	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C342	1-162-918-11	s	CERAMIC, CHIP 18PF 5% 50V
C343	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C344	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C345	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C346	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C347	1-162-970-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C348	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C349	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C350	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C351	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C353	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C354	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C355	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C356	1-165-112-11	s	CERAMIC, CHIP 0.33uF 16V
C357	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C358	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C359	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C360	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C361	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C370	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C372	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C373	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C374	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C375	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C376	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C380	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C381	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C382	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C383	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C386	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C387	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C391	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C392	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C393	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C394	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C395	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C396	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C397	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C398	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C399	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C400	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C401	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C402	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C405	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C406	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C407	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C408	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C409	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C410	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C411	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C412	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C413	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C414	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C415	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C416	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C417	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C418	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C419	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C420	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C421	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C422	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C423	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C424	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C425	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C426	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C427	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C428	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C429	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C430	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C431	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C432	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C434	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C435	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C436	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C438	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C439	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C440	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C441	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C442	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C443	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C444	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C445	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C446	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C447	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C448	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C449	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C450	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C451	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C452	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C453	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C454	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C456	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C457	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C458	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C459	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C460	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C461	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C462	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C463	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C464	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C465	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C466	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C467	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C468	1-162-968-11	s	CERAMIC, CHIP 0.0047uF 10% 50V
C470	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C471	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C472	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C473	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C474	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C475	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C477	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C478	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C479	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V

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Ref. No. or Q'ty	Part No.	SP	Description
C481	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C482	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C483	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C484	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C485	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C486	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C487	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C488	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C489	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C490	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C491	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C493	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C494	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C495	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C496	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C497	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C498	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C499	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C500	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C501	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C502	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C503	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C504	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C505	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C506	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C507	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C508	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C509	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C510	1-107-816-11	s	TANTALUM, CHIP 0.68uF 20% 10V
C511	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
CN101	1-784-695-11	o	CONNECTOR, FFC/FPC (ZIF) 30P
C512	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C513	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C514	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C515	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C516	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C517	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C518	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C519	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C520	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
DL102	1-406-742-11	s	DELAY LINE
DL105	1-406-742-11	s	DELAY LINE
DL108	1-406-742-11	s	DELAY LINE
FL101	1-233-943-11	s	FILTER, LOW-PASS
FL102	1-233-943-11	s	FILTER, LOW-PASS
FL103	1-233-943-11	s	FILTER, LOW-PASS
IC101	8-759-488-89	s	IC CXA8066M-E2
IC102	8-759-488-89	s	IC CXA8066M-E2
IC103	8-759-493-34	s	IC EL2280CS-TE2
IC104	8-759-359-66	s	IC TL082CPW-E05
IC105	8-759-359-66	s	IC TL082CPW-E05
IC106	8-752-052-77	s	IC CXA1450M
IC107	8-759-182-47	s	IC CLC520AJE-L
IC108	8-759-359-66	s	IC TL082CPW-E05
IC110	8-759-493-31	s	IC EL2170CW-TE2
IC112	8-752-052-77	s	IC CXA1450M
IC113	8-759-493-34	s	IC EL2280CS-TE2

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Ref. No. or Q'ty	Part No.	SP	Description
IC114	8-759-359-66	s	IC TL082CPW-E05
IC115	8-759-082-61	s	IC TC4W53FU
IC116	8-759-493-32	s	IC EL2270CS-TE2
IC117	8-759-493-30	s	IC EL2176CS-TE2
IC118	8-759-493-31	s	IC EL2170CW-TE2
IC119	8-752-052-77	s	IC CXA1450M
IC120	8-752-052-77	s	IC CXA1450M
IC122	8-759-635-27	s	IC M62352GP-E1
IC123	8-759-635-27	s	IC M62352GP-E1
IC126	8-759-076-06	s	IC TL064CPW
IC127	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC129	8-759-281-18	s	IC M62381FP-E1
IC130	8-759-635-27	s	IC M62352GP-E1
IC131	8-759-635-27	s	IC M62352GP-E1
IC132	8-759-635-27	s	IC M62352GP-E1
IC133	8-759-488-89	s	IC CXA8066M-E2
IC134	8-759-488-89	s	IC CXA8066M-E2
IC135	8-759-493-34	s	IC EL2280CS-TE2
IC136	8-759-359-66	s	IC TL082CPW-E05
IC137	8-759-359-66	s	IC TL082CPW-E05
IC138	8-752-052-77	s	IC CXA1450M
IC139	8-759-182-47	s	IC CLC520AJE-L
IC140	8-759-359-66	s	IC TL082CPW-E05
IC142	8-759-493-31	s	IC EL2170CW-TE2
IC144	8-752-052-77	s	IC CXA1450M
IC145	8-759-493-34	s	IC EL2280CS-TE2
IC146	8-759-359-66	s	IC TL082CPW-E05
IC147	8-759-082-61	s	IC TC4W53FU
IC148	8-759-493-32	s	IC EL2270CS-TE2
IC149	8-759-493-30	s	IC EL2176CS-TE2
IC150	8-759-493-31	s	IC EL2170CW-TE2
IC151	8-752-052-77	s	IC CXA1450M
IC152	8-752-052-77	s	IC CXA1450M
IC153	8-759-488-89	s	IC CXA8066M-E2
IC154	8-759-488-89	s	IC CXA8066M-E2
IC155	8-759-493-34	s	IC EL2280CS-TE2
IC156	8-759-359-66	s	IC TL082CPW-E05
IC157	8-759-359-66	s	IC TL082CPW-E05
IC158	8-752-052-77	s	IC CXA1450M
IC159	8-759-182-47	s	IC CLC520AJE-L
IC160	8-759-359-66	s	IC TL082CPW-E05
IC162	8-759-493-31	s	IC EL2170CW-TE2
IC164	8-752-052-77	s	IC CXA1450M
IC165	8-759-493-34	s	IC EL2280CS-TE2
IC166	8-759-359-66	s	IC TL082CPW-E05
IC167	8-759-082-61	s	IC TC4W53FU
IC168	8-759-493-32	s	IC EL2270CS-TE2
IC169	8-759-493-30	s	IC EL2176CS-TE2
IC170	8-759-493-31	s	IC EL2170CW-TE2
IC171	8-752-052-77	s	IC CXA1450M
IC172	8-752-052-77	s	IC CXA1450M
IC173	8-759-082-61	s	IC TC4W53FU
IC174	8-759-082-61	s	IC TC4W53FU
IC175	8-759-359-66	s	IC TL082CPW-E05
IC177	8-759-082-61	s	IC TC4W53FU
IC178	8-759-076-06	s	IC TL064CPW
IC179	8-759-076-06	s	IC TL064CPW
IC180	8-759-076-06	s	IC TL064CPW
IC181	8-759-082-61	s	IC TC4W53FU

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Ref. No. or Q'ty	Part No.	SP	Description
IC182	8-759-082-61	s	IC TC4W53FU
IC183	8-759-359-66	s	IC TL082CPW-E05
IC185	8-759-082-61	s	IC TC4W53FU
IC186	8-759-082-61	s	IC TC4W53FU
IC187	8-759-082-61	s	IC TC4W53FU
IC188	8-759-359-66	s	IC TL082CPW-E05
IC190	8-759-082-61	s	IC TC4W53FU
IC191	8-759-493-31	s	IC EL2170CW-TE2
IC192	8-759-493-31	s	IC EL2170CW-TE2
IC193	8-759-493-31	s	IC EL2170CW-TE2
IC194	8-759-710-88	s	IC NJM431U
Q108	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q109	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q110	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q111	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q112	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q114	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q115	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q116	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q117	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q125	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q126	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q127	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q128	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q129	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q131	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q139	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q140	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q141	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q142	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q143	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q145	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q146	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q147	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q151	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q152	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q153	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q154	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q155	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q159	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q160	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q161	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q162	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q163	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q167	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q168	8-729-019-94	s	TRANSISTOR 2SK1589-L
Q169	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q170	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q171	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q172	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q173	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q174	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q175	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q176	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q177	8-729-143-14	s	TRANSISTOR 2SC4176-B35
Q178	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q179	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q180	8-729-143-07	s	TRANSISTOR 2SA1610-Y33

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Ref. No. or Q'ty	Part No.	SP	Description
Q181	8-729-143-14	s	TRANSISTOR 2SC4176-B35
R101	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R102	1-218-879-11	s	RES, CHIP 22K 0.50% 1/16W
R103	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R104	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R105	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R107	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R108	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R109	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R111	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R112	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R116	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R124	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R125	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R126	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R127	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R129	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R130	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R131	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R132	1-211-977-11	s	METAL, CHIP 22 0.5% 1/16W
R133	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R134	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R135	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R136	1-218-834-11	s	RES, CHIP 300 0.50% 1/16W
R137	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R138	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R139	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R140	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R148	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R150	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R151	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R154	1-218-897-11	s	METAL, CHIP 120K 0.50% 1/16W
R156	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R157	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R158	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R168	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R169	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R172	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R173	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R174	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R175	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R181	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R182	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R185	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R186	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R188	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R190	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R192	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R193	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R196	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R197	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R200	1-218-834-11	s	RES, CHIP 300 0.50% 1/16W
R201	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R202	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R203	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R204	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R205	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R206	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R220	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R221	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R223	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R225	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R226	1-218-864-11	s	RES, CHIP 5.1K 0.50% 1/16W
R227	1-218-844-11	s	METAL, CHIP 750 0.50% 1/16W
R228	1-218-841-11	s	METAL, CHIP 560 0.50% 1/16W
R229	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R230	1-218-854-11	s	METAL, CHIP 2K 0.50% 1/16W
R231	1-218-828-11	s	METAL, CHIP 160 0.50% 1/16W
R232	1-211-974-11	s	RES, CHIP 16 0.50% 1/16W
R233	1-218-842-11	s	METAL, CHIP 620 0.50% 1/16W
R234	1-211-976-11	s	RES, CHIP 20 0.50% 1/16W
R235	1-211-975-11	s	RES, CHIP 18 0.50% 1/16W
R236	1-218-844-11	s	METAL, CHIP 750 0.50% 1/16W
R237	1-218-864-11	s	METAL, CHIP 5.1K 0.50% 1/16W
R238	1-218-828-11	s	METAL, CHIP 160 0.50% 1/16W
R239	1-211-984-11	s	RES, CHIP 43 0.50% 1/16W
R240	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R241	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R242	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R252	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R253	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R254	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R255	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R256	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R257	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R264	1-218-879-11	s	RES, CHIP 47K 0.50% 1/16W
R265	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R266	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R267	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R268	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R269	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R270	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R271	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R272	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R273	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R274	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R277	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R279	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R280	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R281	1-218-879-11	s	RES, CHIP 22K 0.50% 1/16W
R282	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R283	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R284	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R285	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R287	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R288	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R289	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R294	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R296	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R297	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R304	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R305	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R306	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R307	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R309	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R310	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R311	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R312	1-211-977-11	s	METAL, CHIP 22 0.5% 1/16W
R313	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R314	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R315	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R316	1-218-834-11	s	RES, CHIP 300 0.50% 1/16W
R317	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R318	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R319	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R320	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R328	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R330	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R331	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R334	1-218-897-11	s	METAL, CHIP 120K 0.50% 1/16W
R336	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R337	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R338	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R350	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R351	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R355	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R356	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R358	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R359	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R366	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R367	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R370	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R371	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R372	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R373	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R374	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R375	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R376	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R377	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R380	1-218-834-11	s	RES, CHIP 300 0.50% 1/16W
R381	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R382	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R383	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R384	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R385	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R386	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R393	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R394	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R396	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R405	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R406	1-218-864-11	s	RES, CHIP 5.1K 0.50% 1/16W
R407	1-218-844-11	s	METAL, CHIP 750 0.50% 1/16W
R408	1-218-841-11	s	METAL, CHIP 560 0.50% 1/16W
R409	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R410	1-218-842-11	s	METAL, CHIP 620 0.50% 1/16W
R411	1-218-849-11	s	RES, CHIP 1.2K 0.50% 1/16W
R412	1-218-844-11	s	METAL, CHIP 750 0.50% 1/16W
R413	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R414	1-218-879-11	s	RES, CHIP 22K 0.50% 1/16W
R415	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R416	1-218-853-11	s	METAL, CHIP 1.8K 0.50% 1/16W
R417	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R419	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R420	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R421	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R425	1-216-864-11	s	METAL, CHIP 0 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R427	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R428	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R436	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R437	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R438	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R439	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R441	1-218-893-11	s	RES, CHIP 82K 0.50% 1/16W
R442	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R443	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R444	1-211-977-91	s	METAL, CHIP 22 5% 1/16W
R445	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R446	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R447	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R448	1-218-834-11	s	RES, CHIP 300 0.50% 1/16W
R449	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R450	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R451	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R452	1-211-985-11	s	RES, CHIP 47 0.50% 1/16W
R461	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R462	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R463	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R466	1-218-897-11	s	METAL, CHIP 120K 0.50% 1/16W
R468	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R469	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R470	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R480	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R481	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R484	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R485	1-218-857-11	s	RES, CHIP 2.7K 0.50% 1/16W
R487	1-218-831-11	s	RES, CHIP 220 0.50% 1/16W
R488	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R493	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R494	1-218-865-11	s	RES, CHIP 5.6K 0.50% 1/16W
R497	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R498	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R501	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R503	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R505	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R506	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R508	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R509	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R512	1-218-834-11	s	RES, CHIP 300 0.50% 1/16W
R513	1-218-843-11	s	RES, CHIP 680 0.50% 1/16W
R514	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R515	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R516	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R517	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R524	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R525	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R526	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R536	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R537	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R538	1-218-864-11	s	RES, CHIP 5.1K 0.50% 1/16W
R539	1-218-844-11	s	METAL, CHIP 750 0.50% 1/16W
R540	1-218-841-11	s	METAL, CHIP 560 0.50% 1/16W
R541	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R542	1-218-845-11	s	METAL, CHIP 820 0.50% 1/16W
R543	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R544	1-218-844-11	s	METAL, CHIP 750 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R545	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R546	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R547	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R548	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R549	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R550	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R559	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R560	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R561	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R565	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R571	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R572	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R573	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R574	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R575	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R576	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R581	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R582	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R583	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R584	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R585	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R586	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R587	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R588	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R589	1-218-872-11	s	RES, CHIP 11K 0.50% 1/16W
R591	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R592	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R593	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R594	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R595	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R596	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R597	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R598	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R599	1-218-872-11	s	RES, CHIP 11K 0.50% 1/16W
R601	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R602	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R603	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R604	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R605	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R606	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R607	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R608	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R609	1-218-872-11	s	RES, CHIP 11K 0.50% 1/16W
R610	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R611	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R612	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R613	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R614	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R615	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R624	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R625	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R626	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R630	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R631	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R632	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R633	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R634	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R635	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R644	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R645	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R646	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R650	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R651	1-218-897-11	s	METAL, CHIP 120K 0.50% 1/16W
R652	1-218-904-11	s	RES, CHIP 240K 0.50% 1/16W
R653	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R654	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R655	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R656	1-218-897-11	s	METAL, CHIP 120K 0.50% 1/16W
R657	1-218-904-11	s	RES, CHIP 240K 0.50% 1/16W
R658	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R659	1-218-897-11	s	METAL, CHIP 120K 0.50% 1/16W
R660	1-218-904-11	s	RES, CHIP 240K 0.50% 1/16W
R661	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R662	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R663	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R664	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R665	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R666	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R668	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R670	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R671	1-218-840-11	s	METAL, CHIP 510 0.50% 1/16W
R672	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R673	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R674	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R675	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R676	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R677	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R678	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R679	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R681	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R683	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R684	1-218-840-11	s	METAL, CHIP 510 0.50% 1/16W
R685	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R686	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R687	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R688	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R689	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R690	1-211-986-11	s	RES, CHIP 51 0.50% 1/16W
R691	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R692	1-218-861-11	s	RES, CHIP 3.9K 0.50% 1/16W
R693	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R695	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R697	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R698	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R699	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R702	1-218-827-11	s	RES, CHIP 150 0.50% 1/16W
R703	1-218-840-11	s	METAL, CHIP 510 0.50% 1/16W
R704	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R705	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R706	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R707	1-218-835-11	s	RES, CHIP 330 0.50% 1/16W
R708	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R709	1-211-976-11	s	RES, CHIP 20 0.50% 1/16W
R710	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R711	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R712	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R713	1-218-837-11	s	METAL, CHIP 0
R714	1-218-837-11	s	METAL, CHIP 0

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Ref. No. or Q'ty	Part No.	SP	Description
R715	1-218-837-11	s	METAL, CHIP 0
R716	1-218-827-11	s	METAL, CHIP 150 0.50% 1/16W
R717	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R718	1-218-855-11	s	METAL, CHIP 2.2K 0.5% 1/16W
R719	1-218-827-11	s	METAL, CHIP 150 0.50% 1/16W
R720	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R722	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
RV102	1-241-828-21	s	RES, ADJ, METAL 500
RV103	1-241-828-21	s	RES, ADJ, METAL 500
RV104	1-241-830-11	s	RES, ADJ, METAL 2K
RV107	1-241-827-11	s	RES, ADJ, METAL 200
RV108	1-241-827-11	s	RES, ADJ, METAL 200
RV109	1-241-828-21	s	RES, ADJ, METAL 500
RV110	1-241-828-21	s	RES, ADJ, METAL 500
RV111	1-241-828-21	s	RES, ADJ, METAL 500
RV113	1-241-828-21	s	RES, ADJ, METAL 500
RV114	1-241-828-21	s	RES, ADJ, METAL 500
RV115	1-241-830-11	s	RES, ADJ, METAL 2K
RV118	1-241-827-11	s	RES, ADJ, METAL 200
RV119	1-241-827-11	s	RES, ADJ, METAL 200
RV121	1-241-828-21	s	RES, ADJ, METAL 500
RV122	1-241-828-21	s	RES, ADJ, METAL 500
RV123	1-241-830-11	s	RES, ADJ, METAL 2K
RV126	1-241-827-11	s	RES, ADJ, METAL 200
RV127	1-241-827-11	s	RES, ADJ, METAL 200

TG-192 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8318-111-A	o	MOUNTED CIRCUIT BOARD, TG-192
C801	1-113-985-11	s	TANTALUM, CHIP 10uF 20% 20V
C802	1-113-985-11	s	TANTALUM, CHIP 10uF 20% 20V
C803	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C804	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C805	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C806	1-113-985-11	s	TANTALUM, CHIP 10uF 20% 20V
C807	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C808	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C809	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C810	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C811	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C812	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C813	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C814	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C815	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C816	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C817	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C818	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C819	1-110-569-11	s	TANTALUM, CHIP 47uF 20% 6.3V
C820	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C821	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C822	1-113-642-11	s	TANTALUM, CHIP 47uF 20% 10V
C823	1-113-642-11	s	TANTALUM, CHIP 47uF 20% 10V
C824	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C825	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C830	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C832	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C834	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C835	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C836	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C837	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C838	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C839	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C840	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C841	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C842	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C843	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C844	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C845	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C846	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C847	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C848	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C849	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C850	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C853	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C854	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C855	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C856	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C857	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C858	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C862	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C863	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 20V
C864	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C865	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C866	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C867	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C868	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V

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Ref. No. or Q'ty	Part No.	SP	Description
C870	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C871	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C872	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C873	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C874	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C875	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C876	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C877	1-107-854-11	s	TANTALUM, CHIP 68uF 20% 6.3V
C879	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C882	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C883	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C885	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C886	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C887	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C888	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C889	1-162-915-11	s	CERAMIC, CHIP 10PF 0.5PF 50V
C890	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C891	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 20V
C892	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C893	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C894	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C895	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C896	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C897	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C898	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C899	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C900	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C902	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C907	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C908	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C910	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C911	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C912	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C913	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C914	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C915	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C916	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C917	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C919	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C920	1-162-917-11	s	CERAMIC, CHIP 15PF 5% 50V
C921	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C923	1-113-682-11	s	TANTALUM, CHIP 33uF 20% 10V
C924	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C925	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C926	1-164-217-11	s	CERAMIC, CHIP 150PF 5% 50V
C927	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C928	1-162-920-11	s	CERAMIC, CHIP 27PF 5% 50V
C929	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C930	1-162-920-11	s	CERAMIC, CHIP 27PF 5% 50V
C931	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C932	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C933	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C934	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C935	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C936	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C937	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C938	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C939	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C940	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C941	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C942	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C943	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C944	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C945	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C946	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C947	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C948	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C949	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C950	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C951	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C952	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C953	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C954	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C955	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C956	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C957	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C958	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C959	1-135-091-00	s	TANTALUM, CHIP 1uF 20% 16V
C960	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C961	1-107-826-11	s	CERAMIC, CHIP 0.1uF 10% 16V
C962	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C963	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C964	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C965	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C966	1-107-686-11	s	TANTALUM, CHIP 4.7uF 20% 16V
C967	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C968	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C969	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C975	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C976	1-104-851-11	s	TANTALUM, CHIP 10uF 20% 10V
C977	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C978	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C979	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C981	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C983	1-162-964-11	s	CERAMIC, CHIP 1000PF 10% 50V
CN801	1-784-696-11	o	CONNECTOR, FFC/FPC (ZIF) 40P
CN803	1-573-307-11	s	CONNECTOR, BOARD TO BOARD 14P
D801	8-719-047-39	s	DIODE MA717-TX
D802	8-719-047-39	s	DIODE MA717-TX
D803	8-719-017-94	s	DIODE MA8180
D804	8-719-047-39	s	DIODE MA717-TX
D805	8-719-105-32	s	DIODE RD2.7M-B2
D806	8-719-047-39	s	DIODE MA717-TX
D807	8-719-047-39	s	DIODE MA717-TX
D808	8-719-059-51	s	DIODE MA3J142E0LSO
D810	8-719-047-39	s	DIODE MA717-TX
D811	8-719-047-39	s	DIODE MA717-TX
D812	8-719-059-51	s	DIODE MA3J142E0LSO
D813	8-719-059-51	s	DIODE MA3J142E0LSO
D814	8-719-059-51	s	DIODE MA3J142E0LSO
D815	8-719-059-51	s	DIODE MA3J142E0LSO
DL801	1-415-940-21	s	DELAY LINE
DL802	1-403-569-21	s	DELAY LINE 50nS
FL801	1-234-074-11	s	FILTER, TRAP
FL802	1-234-074-11	s	FILTER, TRAP
FL803	1-234-074-11	s	FILTER, TRAP

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Ref. No. or Q'ty	Part No.	SP	Description
FL804	1-234-074-11	s	FILTER, TRAP
IC801	8-752-349-00	s	IC CXD1260N
IC802	8-752-351-17	s	IC CXD1262J
IC803	8-759-058-58	s	IC TC7S04FU(TE85R)
IC804	8-759-076-06	s	IC TL064CPW
IC805	8-759-082-61	s	IC TC4W53FU
IC806	8-759-078-75	s	IC UPD6453GT-610
IC807	8-759-058-54	s	IC TC7S00FU(TE85R)
IC808	8-759-058-62	s	IC TC7S08FU(TE85R)
IC809	8-759-190-60	s	IC CXD8843R
IC810	8-759-058-58	s	IC TC7S04FU(TE85R)
IC812	8-752-083-93		IC CXA3089N
IC813	8-759-523-07	s	IC TC74AC04FT(EL)
IC814	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC815	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC816	8-759-430-39	s	IC LT1359CS-E2
IC817	8-759-244-00	s	IC TC74AC161F
IC818	8-759-244-00	s	IC TC74AC161F
IC819	8-759-523-11	s	IC TC74AC74FT(EL)
IC820	8-759-357-72	s	IC NJU3712M(TE2)
IC821	8-759-635-27	s	IC M62352GP-E1
IC822	8-759-523-07	s	IC TC74AC04FT(EL)
IC823	8-759-635-27	s	IC M62352GP-E1
IC824	8-759-076-06	s	IC TL064CPW
IC825	8-759-076-06	s	IC TL064CPW
IC826	8-759-523-30	s	IC TC74AC541FT(EL)
IC827	8-759-058-58	s	IC TC7S04FU(TE85R)
IC828	8-759-488-50	s	IC CXD8643R
IC830	8-759-082-61	s	IC TC4W53FU
IC831	8-759-430-39	s	IC LT1359CS-E2
IC836	8-759-523-03	s	IC TC74HC4066AFT(EL)
IC837	8-759-523-03	s	IC TC74HC4066AFT(EL)
IC838	8-759-523-00	s	IC TC74HC4051AFT(EL)
IC839	8-759-173-16	s	IC TL062CPW
IC840	8-759-058-62	s	IC TC7S08FU(TE85R)
IC841	8-759-488-88	s	IC HD64F3337YTF16
IC842	8-759-080-93	s	IC M6M80041FP
IC843	8-759-946-03	s	IC S-8054ALR-LN-S
IC845	8-759-058-58	s	IC TC7S04FU(TE85R)
IC846	8-759-523-11	s	IC TC74AC74FT(EL)
IC847	8-759-523-05	s	IC TC74AC00FT(EL)
IC848	8-759-523-05	s	IC TC74AC00FT(EL)
IC849	8-759-523-02	s	IC TC74HC4053AFT(EL)
IC850	8-759-493-35	s	IC LT1358CS8-E2
IC851	8-759-493-35	s	IC LT1358CS8-E2
IC852	8-759-493-35	s	IC LT1358CS8-E2
IC853	8-759-523-03	s	IC TC74HC4066AFT(EL)
IC854	8-759-460-95	s	IC AD22100KR-REEL
IC855	8-759-058-58	s	IC TC7S04FU(TE85R)
IC856	8-759-523-11	s	IC TC74AC74FT(EL)
IC857	8-759-523-11	s	IC TC74AC74FT(EL)
IC858	8-759-257-96	s	IC TC7S14FU(TE85R)
IC859	8-759-257-96	s	IC TC7S14FU(TE85R)
IC860	8-759-058-62	s	IC TC7S08FU(TE85R)
IC861	8-759-523-11	s	IC TC74AC74FT(EL)
IC862	8-759-523-11	s	IC TC74AC74FT(EL)
IC863	8-759-523-05	s	IC TC74AC00FT(EL)

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Ref. No. or Q'ty	Part No.	SP	Description
L802	1-412-029-11	s	INDUCTOR, CHIP 10uH
L803	1-412-029-11	s	INDUCTOR, CHIP 10uH
L806	1-412-029-11	s	INDUCTOR, CHIP 10uH
Q801	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q802	8-729-118-58	s	TRANSISTOR 2SK852-X4
Q803	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q804	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q805	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q806	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q807	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q808	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q809	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q810	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q811	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q812	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q813	8-729-429-67	s	TRANSISTOR 2SA1791-Q
Q814	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q815	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q816	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q817	8-729-143-07	s	TRANSISTOR 2SA1610-Y33
Q818	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q819	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q820	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
Q821	8-729-037-89	s	TRANSISTOR 2SC4627J-C(TX).SO
R801	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R802	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R803	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R804	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R805	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R806	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R807	1-218-887-11	s	RES, CHIP 47K 0.50% 1/16W
R808	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R809	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R810	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R811	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R812	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R813	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R814	1-218-895-11	s	RES, CHIP 100K 0.50% 1/16W
R815	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R816	1-218-823-11	s	RES, CHIP 100 0.50% 1/16W
R817	1-216-864-11	s	METAL, CHIP 0
R818	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R819	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R820	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R822	1-218-871-11	s	METAL, CHIP 10K 0.50% 1/16W
R823	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R824	1-216-817-11	s	METAL, CHIP 470 5% 1/16W
R832	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R833	1-218-879-11	s	METAL, CHIP 22K 0.50% 1/16W
R834	1-218-839-11	s	RES, CHIP 470 0.50% 1/16W
R835	1-218-859-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R836	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R837	1-218-863-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R838	1-216-815-11	s	METAL, CHIP 330 5% 1/16W
R839	1-216-815-11	s	METAL, CHIP 330 5% 1/16W
R840	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R841	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R842	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R843	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R844	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R845	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R846	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R847	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R848	1-216-830-11	s	METAL, CHIP 5.6K 5% 1/16W
R849	1-216-826-11	s	METAL, CHIP 2.7K 5% 1/16W
R851	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R853	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R855	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R856	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R857	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R858	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R861	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R864	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R865	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R866	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R867	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R868	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R870	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R871	1-216-813-11	s	METAL, CHIP 220 5% 1/16W
R872	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R873	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R874	1-216-813-11	s	METAL, CHIP 220 5% 1/16W
R875	1-216-813-11	s	METAL, CHIP 220 5% 1/16W
R876	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R877	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R878	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R879	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R880	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R881	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R882	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R883	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R884	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R885	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R886	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R887	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R889	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R890	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R891	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R892	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R893	1-216-806-11	s	METAL, CHIP 56 5% 1/16W
R894	1-216-801-11	s	METAL, CHIP 22 0.50% 1/16W
R895	1-216-834-11	s	METAL, CHIP 12K 5% 1/16W
R896	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R897	1-216-834-11	s	METAL, CHIP 12K 5% 1/16W
R898	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R899	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R900	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R901	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R902	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R904	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R906	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R908	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R909	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R910	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R911	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R912	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R913	1-216-864-11	s	METAL, CHIP 0 5% 1/16W

(TG-192 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R914	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R915	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R916	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R917	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R918	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R919	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R920	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R921	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R922	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R923	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R924	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R925	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R926	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R927	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R928	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R929	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R930	1-216-832-11	s	METAL, CHIP 8.2K 5% 1/16W
R931	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R932	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R933	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R934	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R935	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R936	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R937	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R938	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R939	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R940	1-216-828-11	s	METAL, CHIP 3.9K 5% 1/16W
R941	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R942	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R943	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R944	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R945	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R946	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R947	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R948	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R949	1-216-845-11	s	METAL, CHIP 100K 5% 1/16W
R950	1-216-815-11	s	METAL, CHIP 330 5% 1/16W
R951	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R952	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R953	1-216-815-11	s	METAL, CHIP 330 5% 1/16W
R954	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R955	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R956	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R957	1-216-817-11	s	METAL, CHIP 470 5% 1/16W
R958	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R959	1-216-805-11	s	METAL, CHIP 47 5% 1/16W
R960	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R961	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R962	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R963	1-216-815-11	s	METAL, CHIP 330 5% 1/16W
R965	1-218-880-11	s	METAL, CHIP 24K 0.50% 1/16W
R968	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R969	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R970	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R974	1-216-841-11	s	METAL, CHIP 47K 5% 1/16W
R975	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R976	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R977	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R978	1-216-806-11	s	METAL, CHIP 56 5% 1/16W

(TG-192 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R981	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R982	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R983	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R984	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R985	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R986	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R988	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R989	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R990	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R991	1-218-847-11	s	METAL, CHIP 1K 0.50% 1/16W
R992	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R993	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R994	1-218-855-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R995	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R996	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R997	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R999	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1501	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R1502	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1503	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1504	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1505	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R1508	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1509	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1510	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R1512	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R1513	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R1514	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R1515	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
S801	1-692-270-21	s	SWITCH, SLIDE
S802	1-572-473-11	s	SWITCH, PUSH
S803	1-692-270-21	s	SWITCH, SLIDE
S804	1-571-120-11	s	SWITCH, SLIDE
X801	1-767-328-11	s	OSCILLATOR, CRYSTAL
X802	1-577-076-11	s	CRYSTAL, 16.000MHz
X803	1-767-329-11	s	OSCILLATOR, CRYSTAL

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
CN1204	1-766-566-11	o	CONNECTOR, ROUND TYPE (M)(26P) "CAMERA ADAPTOR"
CN1205	1-580-090-11	s	CONNECTOR, D-SUB 9P, FEMALE "MONITOR"
CN1206	1-562-221-31	s	RECEPTACLE, CONNECTOR 12P "IRIS"
CN1207	1-562-381-00	s	CONNECTOR, ROUND TYPE 12P, MALE "CTRL"
CN1208	1-569-084-12	s	CONNECTOR, SYNCHRONIZE, FEMALE "FLASH"
1pc	1-763-099-11	s	FAN, DC
1pc	1-475-718-11	s	TRANSFORMER, DC-DC CONVERTER
1pc	1-783-380-11	o	CABLE, FLEXIBLE FLAT (50 CORE) "CN1103/MB-758 to CN1203/CN-1494"
1pc	1-783-381-11	o	CABLE, FLEXIBLE FLAT (40 CORE) "CN801/TG-192 to CN1001/DR-351"

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-612-593-02	o	SHEET,REMOTE CONTROL
1pc	3-862-128-01	s	MANUAL, INSTRUCTION

SECTION 6
SEMICONDUCTOR PIN ASSIGNMENTS

Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

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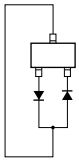
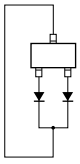
DIODE

—TOP VIEW—



1SS123-T1
1SS226

—TOP VIEW—



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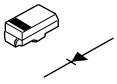
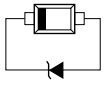


MA717-TX

—TOP VIEW—

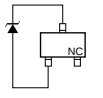
MA720
MA720-(TX)
MA737-TX

—TOP VIEW—



MA8180-TX

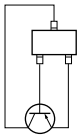
—TOP VIEW—



RD12M-B
RD12M-T1B
RD2.0M-T1B
RD2.0MB
RD2.7M-B2
RD2.7M-T1B

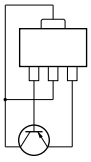
TRANSISTOR

—TOP VIEW—



2SA1462
2SA1462-T1Y34
2SA1610-T1Y34
2SA1610-Y33
2SA1791-(TX)-Q
2SA1791-Q

—TOP VIEW—



2SA1463IK
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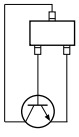

2SC3735-L-B35
2SC3735-T1B-B35
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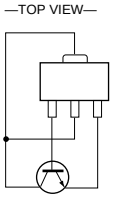
2SC4656-(TX)-Q
2SC4656-Q

—TOP VIEW—



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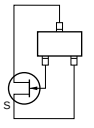
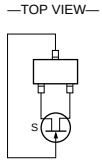
2SC3736-T10K
2SD1005-BV
2SD1005-T1BVBU
2SD1614-T1XK
2SD1621-ST

—TOP VIEW—



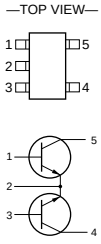
2SK1589-L
2SK1589-L-T1B

—TOP VIEW—



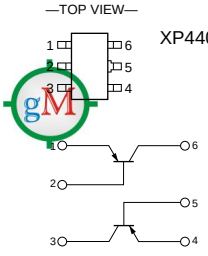
2SK852-T1X4
2SK852-X4

—TOP VIEW—



XP1501-TXE

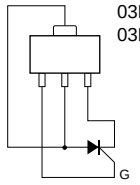
—TOP VIEW—



XP4401-TXE

OTHERS

—TOP VIEW—

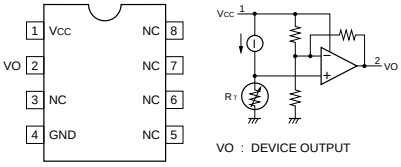


03P4J
03P4J-T1

IC

AD22100KR-REEL (ANALOG DEVICES)FLAT PACKAGE

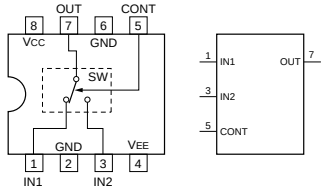
VOLTAGE OUTPUT TEMPERATURE SENSOR
—TOP VIEW—



VO : DEVICE OUTPUT

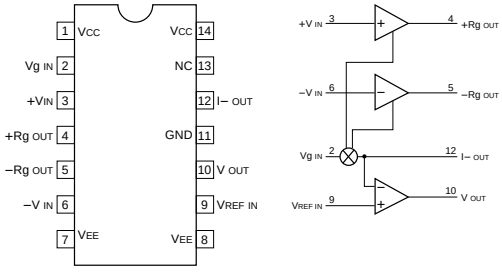
CXA1450M-TH (SONY)FLAT PACKAGE

VIDEO SIGNAL SWITCH
—TOP VIEW—



CLC520AJE-L (COMLINEAR)

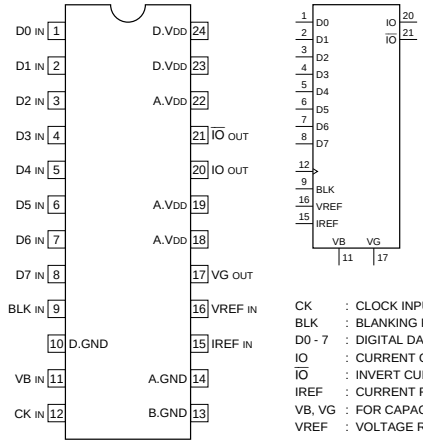
WIDEBAND AMP WITH VOLTAGE CONTROLLED GAIN
—TOP VIEW—



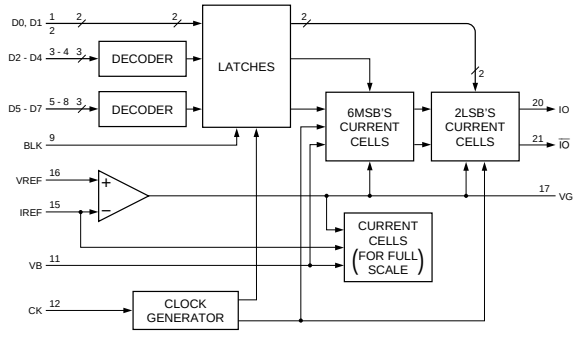
+V IN, –V IN	:	SIGNAL INPUT
Vg	:	GAIN CONTROL VOLTAGE
+Rg, –Rg	:	GAIN SETTING RESISTOR
I– OUT	:	FEED BACK
V OUT	:	SIGNAL OUTPUT
VREF IN	:	OFFSET ADJUSTMENT

CXD1171M (SONY)FLAT PACKAGE
CXD1171M-TH

C-MOS 8-BIT D/A CONVERTER
—TOP VIEW—

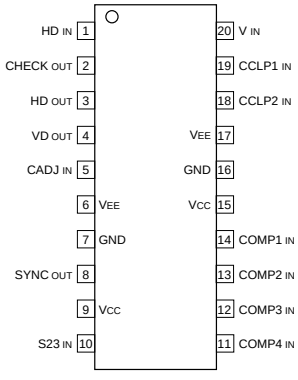


CK	:	CLOCK INPUT
BLK	:	BLANKING PULSE INPUT
D0 - 7	:	DIGITAL DATA INPUT
IO	:	CURRENT OUTPUT
$\overline{IO}$	:	INVERT CURRENT OUTPUT
IREF	:	CURRENT REFERENCE INPUT
VB, VG	:	FOR CAPACITOR
VREF	:	VOLTAGE REFERENCE INPUT



CXA1652N (SONY)

SYNC SEPARATOR
—TOP VIEW—

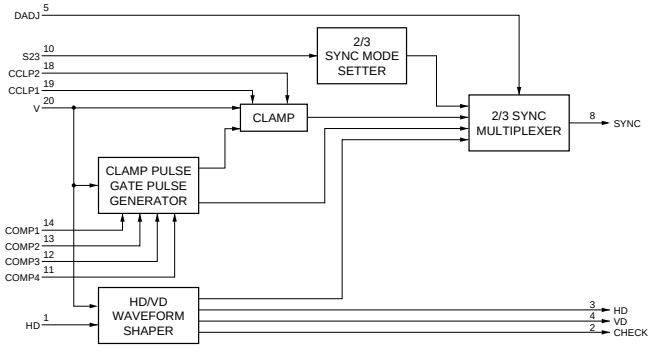


INPUT

CADJ	:	SYNC SEP SLICE LEVEL CONTROL
CCLP1, CCLP2	:	EXTERNAL CAPACITOR FOR CLAMP
COMP1 - COMP4	:	SYNC SEP REFERENCE
HD	:	HORIZONTAL DRIVE PULSE
S23	:	EXTERNAL SYNC MODE SELECT
V	:	VD OR VS

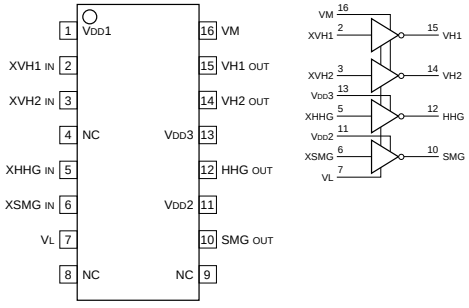
OUTPUT

CHECK	:	WAVEFORM SHAPED HD PULSE
HD	:	HORIZONTAL DRIVE PULSE
SYNC	:	SYNC PULSE
VD	:	VERTICAL DRIVE PULSE



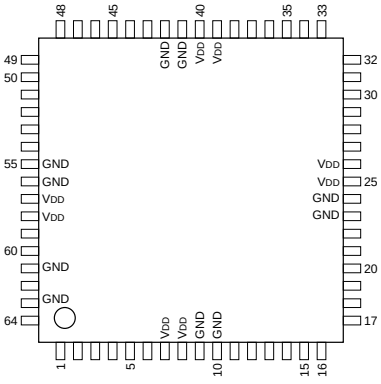
CXD1260N (SONY)

C-MOS CCD CLOCK DRIVER
—TOP VIEW—



CXD8843R (SONY)

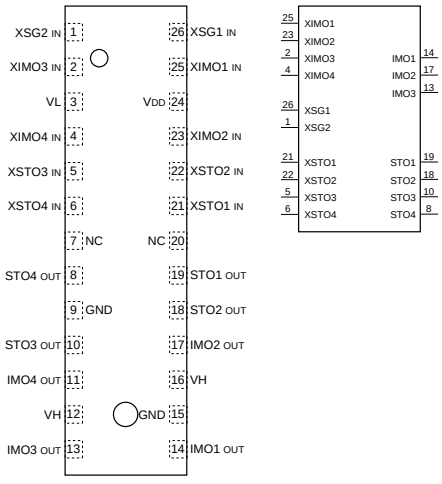
C-MOS GATE ARRAY
—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	XPLLH	17	I	XTRIG	33	I	SIBLK	49	I	CLPGATE
2	I	PPLL	18	I	VSTBY	34	O	WDISPLAY	50	O	CLP1
3	I	PREF	19	I	CS	35	O	VWINDOW	51	O	CLP2
4	O	EXTH	20	I	SI	36	O	HWINDOW	52	O	CLP3
5	I	RSTIN	21	I	SCK	37	O	VD	53	O	OBPCLP
6	I	EXTSYNC	22	I	STB	38	O	HD	54	O	PBLK
7	—	VDD	23	—	GND	39	—	VDD	55	—	GND
8	—	VDD	24	—	GND	40	—	VDD	56	—	GND
9	—	GND	25	—	VDD	41	—	GND	57	—	VDD
10	—	GND	26	—	VDD	42	—	GND	58	—	VDD
11	I	EXTHD	27	O	EXTMODE	43	O	FLD	59	O	SYSCLK
12	I	EXTVD	28	O	HVMODE	44	O	VBLK	60	O	CKQ
13	O	HR	29	I	TEST0	45	O	CMPBLK	61	—	GND
14	I	HRI	30	I	TEST1	46	O	HBLK	62	I	CKIN
15	O	VR	31	I	TEST2	47	O	SYNC1	63	—	GND
16	I	VRI	32	I	SBKRVS	48	O	SYNC2	64	O	PCO

CXD1262J (SONY)

C-MOS CCD H CLOCK DRIVER
—TOP VIEW—



INPUT

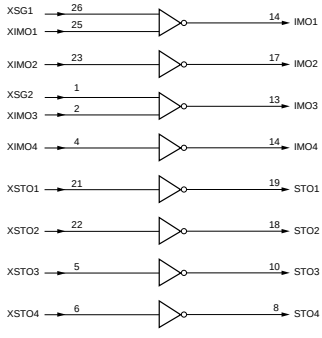
VH : VOLTAGE HIGH POWERSOURCE (+15 V)
VL : VOLTAGE LOW POWERSOURCE (–9 V)
XIMO1 - XIMO4 : OUT CONTROL INVERSION (XIMO1 - XIMO4)
XSG1 - XSG2 : OUT CONTROL INVERSION (XSG1 - XSG2)
XSTO1 - XSTO4 : OUT CONTROL INVERSION (XSTO1 - XSTO2)

OUTPUT

IMO1 - IMO4 : HIGH TENSION (IMO1 - IMO4)
STO1 - STO4 : HIGH TENSION (STO1 - STO4)

INPUTS			OUTPUTS	
XIM1, 3	XSG1, 2	XIM2, 4, XST1 to 4	IM1, 3	IM2, 4, ST1 to 4
0	1	×	VM	×
1	1	×	VL	×
0	0	×	VH	×
1	0	×	Z	×
×	×	0	×	VM
×	×	1	×	VL

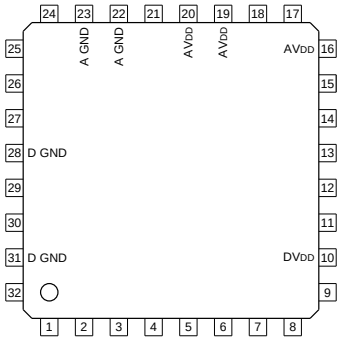
0 ; LOW LEVEL × ; DON'T CARE
1 ; HIGH LEVEL HI-Z ; HIGH IMPEDANCE

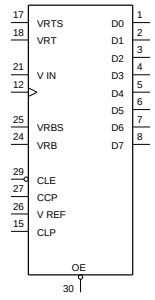


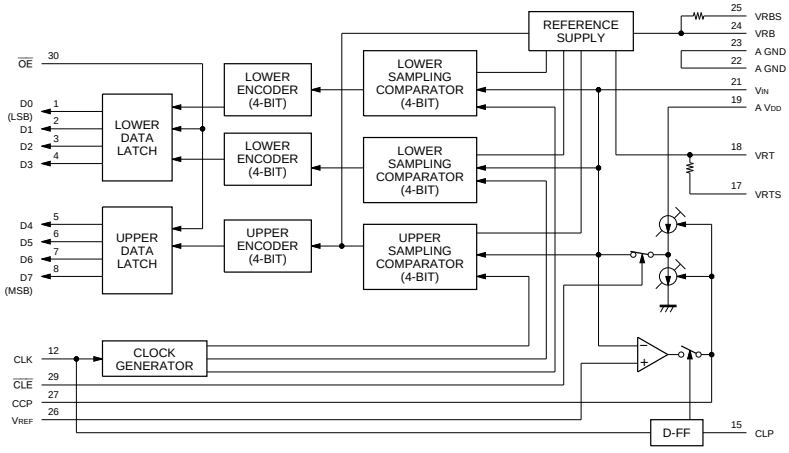
CXD2302Q-T4 (SONY)

C-MOS 8-BIT 50MSPS VIDEO A/D CONVERTER

—TOP VIEW—







PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	D0 (LSB)	17	I	VRTS
2	O	D1	18	I	VRT
3	O	D2	19	—	A VDD
4	O	D3	20	—	A VDD
5	O	D4	21	I	V IN
6	O	D5	22	—	A GND
7	O	D6	23	—	A GND
8	O	D7 (MSB)	24	I	VRB
9	—	TEST	25	I	VRBS
10	—	D VDD	26	I	VREF
11	—	TEST	27	I	CCP
12	I	CLK	28	—	D GND
13	—	NC	29	I	$\overline{CL}$
14	—	NC	30	I	$\overline{OE}$
15	I	CLP	31	—	D GND
16	—	A VDD	32	—	NC

INPUT

CCP : CLAMP CONTROL VOLTAGE FOR INTEGRATOR
$\overline{CLE}$: CLAMP ENABLE
CLK : CLOCK
$\overline{CLP}$: CLAMP PULSE
$\overline{OE}$: OUTPUT ENABLE
V IN : ANALOG
VRB : REFERENCE VOLTAGE (BOTTOM)
VRBS : SELF REFERENCE VOLTAGE SHORT TO AGND (+0.6 V/BOTTOM)
VREF : VOLTAGE REFERENCE FOR CLAMP
VRT : REFERENCE VOLTAGE (TOP)
VRTS : SELF REFERENCE VOLTAGE SHORT TO AVDD (+2.5 V/TOP)

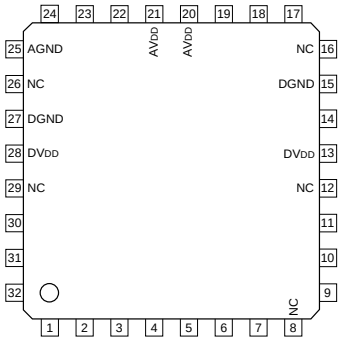
OUTPUT

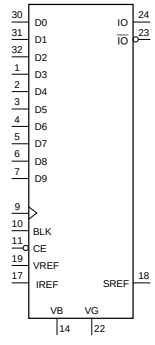
D0 - D7 ; DATA

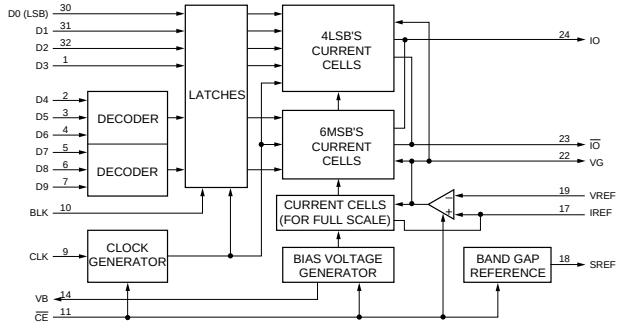
CXD2306Q-T4 (SONY)

C-MOS 10-BIT 1CH D/A CONVERTER

—TOP VIEW—







PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	D3	17	I	IREF
2	I	D4	18	O	SREF
3	I	D5	19	I	VREF
4	I	D6	20	—	AVDD
5	I	D7	21	—	AVDD
6	I	D8	22	O	VG
7	I	D9 (MSB)	23	O	$\overline{IO}$
8	—	NC	24	O	IO
9	I	CK	25	—	AGND
10	I	BLK	26	—	NC
11	I	$\overline{CE}$	27	—	DGND
12	—	NC	28	—	DVDD
13	—	DVDD	29	—	NC
14	O	VB	30	I	D0 (LSB)
15	—	DGND	31	I	D1
16	—	NC	32	I	D2

BLK : BLANKING PULSE INPUT
CE : CHIP ENABLE
CK : CLOCK INPUT
D0 - 7 : DIGITAL DATA INPUTS
IO : CURRENT OUTPUT
$\overline{IO}$: INVERT CURRENT OUTPUT
IREF : CURRENT REFERENCE INPUT
SREF : INDEPENDENT CONSTANT VOLTAGE OUTPUT
VB, VG : FOR CAPACITOR
VREF : VOLTAGE REFERENCE INPUT

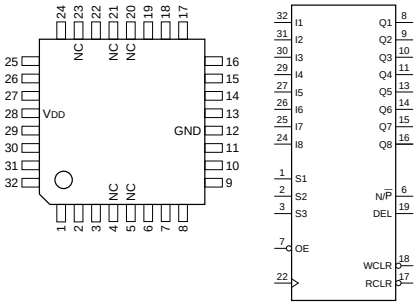
MAXIMUM CONVERSION RATE

CXD2306Q	75MSPS
CXD2315Q	80MSPS

CXK1202Q (SONY)

C-MOS DIGITAL DELAY LINE MEMORY

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	S1	9	O	Q2	17	I	$\overline{RCLR}$	25	I	I7
2	I	S2	10	O	Q3	18	I	$\overline{WCLR}$	26	I	I6
3	I	S3	11	O	Q4	19	I	DEL	27	I	I5
4	—	NC	12	—	GND	20	—	NC	28	—	VDD
5	—	NC	13	O	Q5	21	—	NC	29	I	I4
6	I	NTSC/PAL	14	O	Q6	22	I	CK	30	I	I3
7	I	$\overline{OE}$	15	O	Q7	23	—	NC	31	I	I2
8	O	Q1	16	O	Q8	24	I	I8	32	I	I1

NTSC MODE (N/P : 1)

S1	S2	S3	DELAY AMOUNT
0	0	0	905
1	0	0	906
0	1	0	907
1	1	0	908
0	0	1	909
1	0	1	910
0	1	1	911
1	1	1	912

PAL MODE (N/P : 0)

S1	S2	S3	DELAY AMOUNT
0	0	0	1129
1	0	0	1130
0	1	0	1131
1	1	0	1132
0	0	1	1133
1	0	1	1134
0	1	1	1135
1	1	1	1136

8nCLOCK CLEAR IN (n = 1, 2 ••• 141)

S1	S2	S3	DELAY AMOUNT
0	0	0	8 (n + 1) + 1
1	0	0	8 (n + 1) + 2
0	1	0	8 (n + 1) + 3
1	1	0	8 (n + 1) + 4
0	0	1	8 (n + 1) + 5
1	0	1	8 (n + 1) + 6
0	1	1	8 (n + 1) + 7
1	1	1	8 (n + 2)

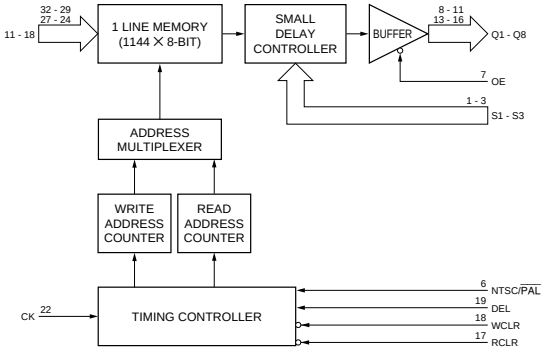
0 : LOW LEVEL
1 : HIGH LEVEL

INPUT

CK : CLOCK
DEL : INT/EXT CLEAR SIGNAL SELECT
I1 - I8 : DATA
N/P : NTSC/PAL/SECAM SELECT
$\overline{OE}$: OUTPUT ENABLE
$\overline{RCLR}$: READ ADDRESS COUNTER
S1 - S3 : DELAY AMOUNT
$\overline{WCLR}$: WRITE ADDRESS COUNTER

OUTPUT

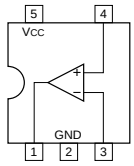
Q1 - Q8 : DATA



EL2170CW-TE2 (ELANTEC INC.)

70 MHz/1 mA CURRENT MODE FEEDBACK AMPLIFIER

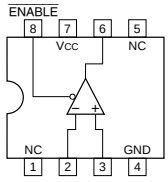
—TOP VIEW—



EL2176CS-TE2 (ELANTEC INC.)

70 MHz/1 mA CURRENT MODE FEEDBACK AMPLIFIER WITH DISABLE

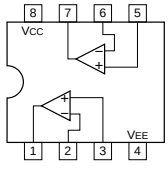
—TOP VIEW—



EL2270CS-TE2 (ELANTEC INC.)

70 MHz/1 mA CURRENT MODE FEEDBACK AMPLIFIER

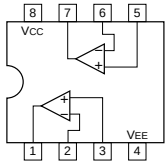
—TOP VIEW—



EL2280CS-TE2 (ELANTEC INC.)

250 MHz/3 mA CURRENT MODE FEEDBACK AMPLIFIER

—TOP VIEW—

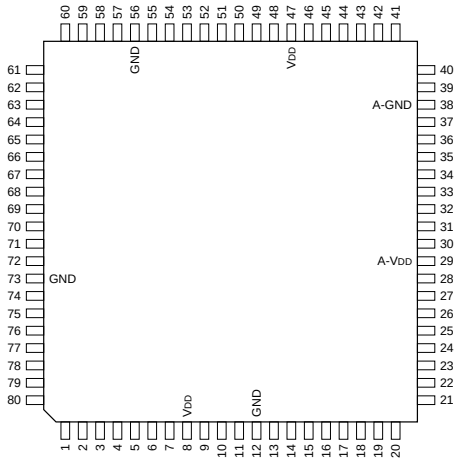


http://getMANUAL.com

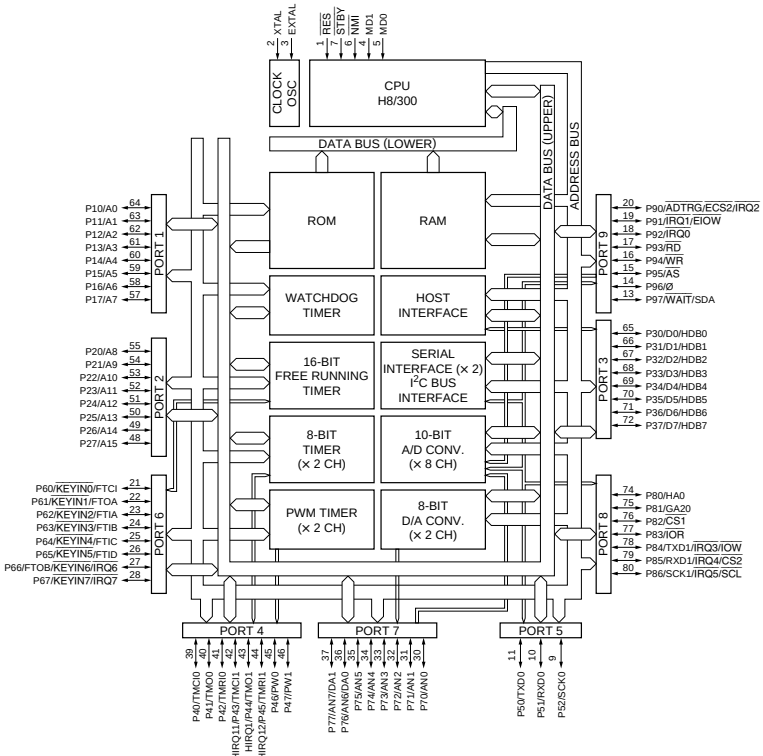
HD64F3337YTF16 (HITACHI)FLAT PACKAGE

C-MOS 8-BIT MICROCOMPUTER

—TOP VIEW—



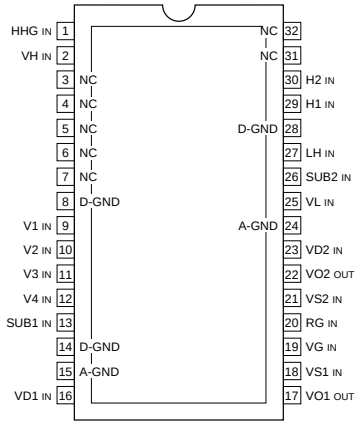
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	$\overline{RES}$	21	I/O	P60/KEYIN0/FTC1	41	I/O	P42/TMRI0	61	I/O	P13/A3
2	I	XTAL	22	I/O	P61/KEYIN1/FTOA	42	I/O	P43/TMCI1/HIRQ11	62	I/O	P12/A2
3	I	EXTAL	23	I/O	P62/KEYIN2/FTIA	43	I/O	P44/TMO1/HIRQ1	63	I/O	P11/A1
4	I	MD1	24	I/O	P63/KEYIN3/FTIB	44	I/O	P45/TMRI1/HIRQ12	64	I/O	P10/A0
5	I	MD0	25	I/O	P64/KEYIN4/FTIC	45	I/O	P46/PW0	65	I/O	P30/HDB0/D0
6	I	$\overline{NMI}$	26	I/O	P65/KEYIN5/FTID	46	I/O	P47/PW1	66	I/O	P31/HDB1/D1
7	I	$\overline{STBY}$	27	I/O	P66/FTOB/KEYIN6/IRQ6	47	—	VDD	67	I/O	P32/HDB2/D2
8	—	VDD	28	I/O	P67/KEYIN7/IRQ7	48	I/O	P27/A15	68	I/O	P33/HDB3/D3
9	I/O	P52/SCK0	29	—	A-VDD	49	I/O	P26/A14	69	I/O	P34/HDB4/D4
10	I/O	P51/RXD0	30	I/O	P70/AN0	50	I/O	P25/A13	70	I/O	P35/HDB5/D5
11	I/O	P50/TXD0	31	I/O	P71/AN1	51	I/O	P24/A12	71	I/O	P36/HDB6/D6
12	—	GND	32	I/O	P72/AN2	52	I/O	P23/A11	72	I/O	P37/HDB7/D7
13	I/O	P97/$\overline{WAIT}$/SDA	33	I/O	P73/AN3	53	I/O	P22/A10	73	—	GND
14	I/O	P96/Ø	34	I/O	P74/AN4	54	I/O	P21/A9	74	I/O	P80/HA0
15	I/O	P95/$\overline{AS}$	35	I/O	P75/AN5	55	I/O	P20/A8	75	I/O	P81/GA20
16	I/O	P94/$\overline{WR}$	36	I/O	P76/AN6/DA0	56	—	GND	76	I/O	P82/$\overline{CS1}$
17	I/O	P93/$\overline{RD}$	37	I/O	P77/AN7/DA1	57	I/O	P17/A7	77	I/O	P83/$\overline{OR}$
18	I/O	P92/IRQ0	38	—	A-GND	58	I/O	P16/A6	78	I/O	P84/$\overline{IOW}$/IRQ3/TXD1
19	I/O	P91/$\overline{IRQ1}$/EIOW	39	I/O	TMCI0/P40	59	I/O	P15/A5	79	I/O	P85/$\overline{CS2}$/IRQ4/RXD1
20	I/O	P90/ADTRG/IRQ2/ECS2	40	I/O	TMC0/P41	60	I/O	P14/A4	80	I/O	P86/IRQ5/SCK1/SCL



ICX090AL (SONY)

CCD IMAGE SENSOR (1940 H × 1040 V PICTURE ELEMENTS)

—TOP VIEW—

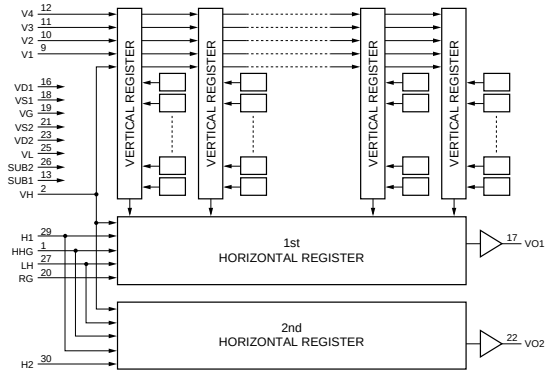


INPUT

H1, H2	:	HORIZONTAL REGISTER TRANSFER CLOCK
HHG	:	1ST AND 2ND HORIZONTAL REGISTERS TRANSFER CLOCK
LH	:	FINAL HORIZONTAL REGISTER TRANSFER CLOCK
RG	:	RESET GATE CLOCK
SUB1, SUB2	:	SUBSLATE BIAS VOLTAGE
V1 - V4	:	VERTICAL REGISTER TRANSFER CLOCK
VD1, VD2	:	POWER INPUT OF OUTPUT AMPLIFIER
VG	:	GATE OF OUTPUT AMPLIFIER
VH	:	VERTICAL/HORIZONTAL REGISTERS TRANSFER CLOCK
VL	:	TRANSISTOR PROTECTION BIAS VOLTAGE
VS1, VS2	:	SOURCE OF OUTPUT AMPLIFIER

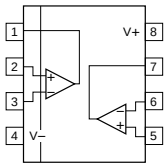
OUTPUT

VO1, VO2 : SIGNAL



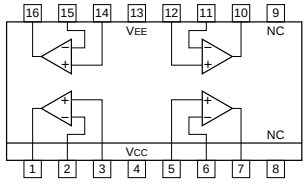
LT1358CS8-E2 (LINEAR TECH)FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIER
—TOP VIEW—



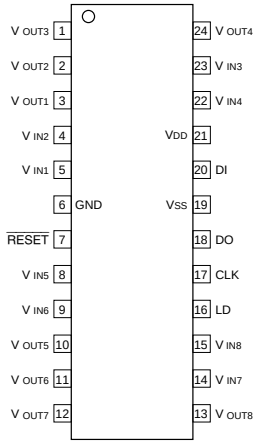
LT1359CS-E2 (LINEAR TECH)FLAT PACKAGE

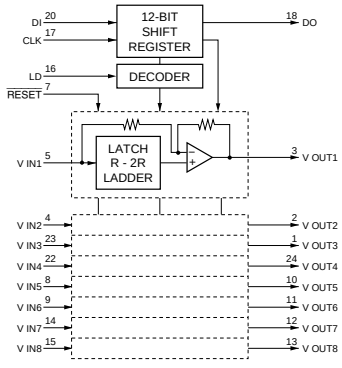
QUAD OPERATIONAL AMPLIFIER
—TOP VIEW—



M62381FP-E1 (MITSUBISHI)FLAT PACKAGE

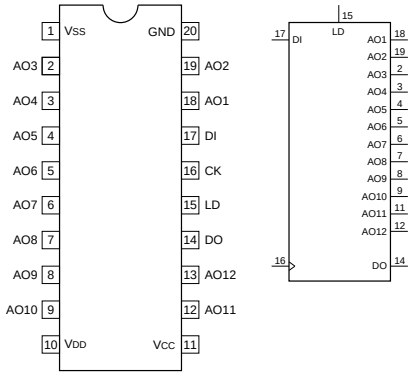
C-MOS 8-BIT 8-CHANNEL D/A CONVERTER
—TOP VIEW—





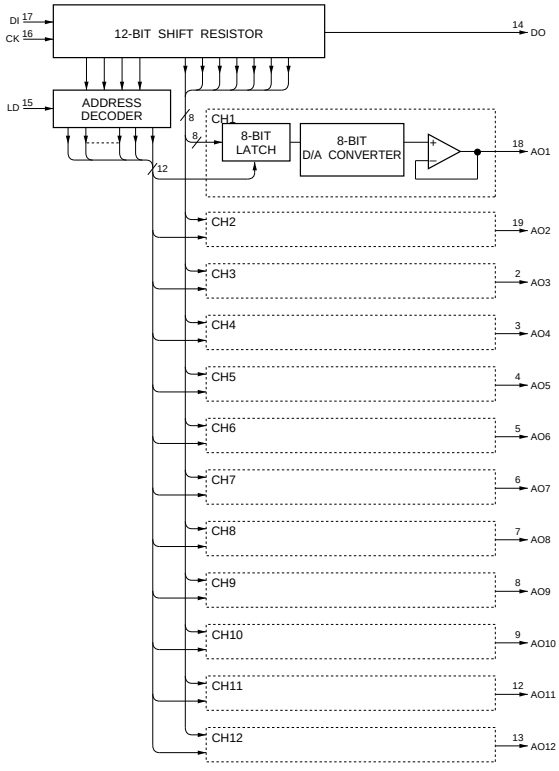
M62352GP (MITSUBISHI)FLAT PACKAGE
M62352GP-75ED

C-MOS 8-BIT × 12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)
—TOP VIEW—



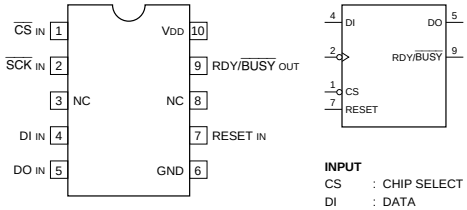
AO1 - AO12 : 8-BIT D/A OUTPUTS
CK : CLOCK INPUT
DI : SERIAL DATA INPUT
DO : DATA OUTPUT

NOTE:
3.5 V < VDD < VCC
−3.5 V < VSS < VCC



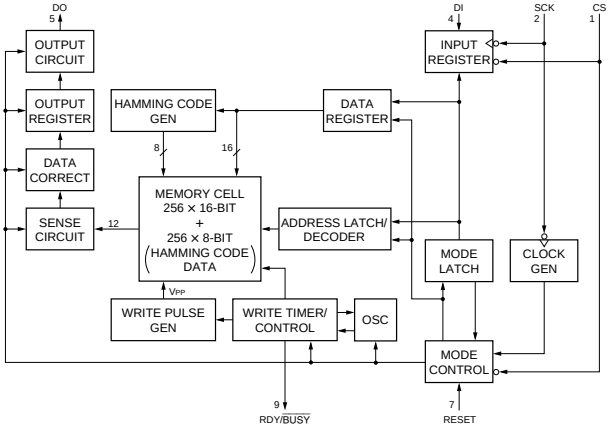
M6M80041FP (MITSUBISHI)FLAT PACKAGE
M6M80041FP-T2

C-MOS 4 K (256 × 16)-BIT EPROM
—TOP VIEW—



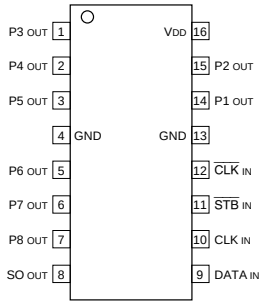
INPUT
CS : CHIP SELECT
DI : DATA
RESET : RESET
SCK : CLOCK

OUTPUT
DO : DATA
RDY/BUSY : BUSY



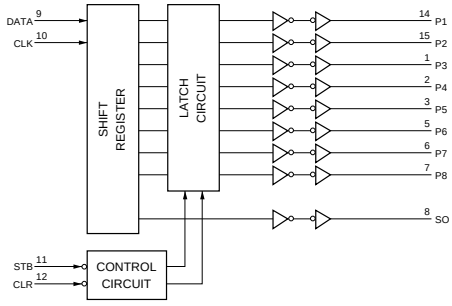
NJU3712M(TE2)
NJU3712M-TE2 (JRC)FLAT PACKAGE

C-MOS 8-BIT SERIAL-TO-PARALLEL CONVERTER
—TOP VIEW—



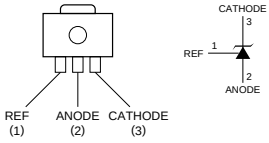
INPUT
CLK : CLOCK
CLR : CLEAR
DATA : SERIAL DATA
STB : STROBE

OUTPUT
P1 - P8 : PARALLEL DATA
SO : SERIAL DATA



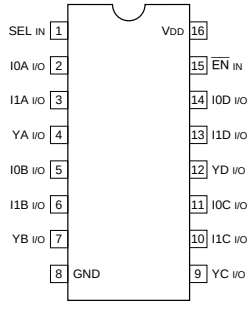
NJM431U (JRC)
NJM431U-TE1

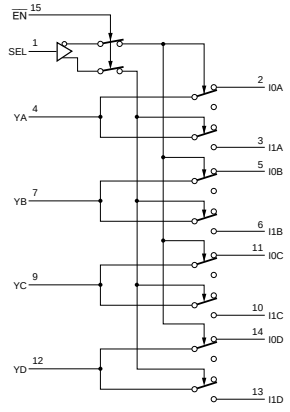
ADJUSTABLE PRECISION SHUNT REGULATOR
—FRONT VIEW—



QS3257Q-T (QUALITY SEMICONDUCTOR IN CO.)FLAT PACKAGE

C-MOS QUAD 2 : 1 MULTIPLEXER/DEMULTIPLEXER
—TOP VIEW—



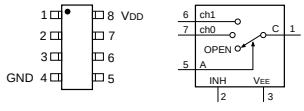


EN	SEL	I/O
0	0	I0 ◄► Y
0	1	I1 ◄► Y
1	×	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

TC4W53FU (TOSHIBA)CHIP PACKAGE
TC4W53FU(TE12R)

C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
—TOP VIEW—

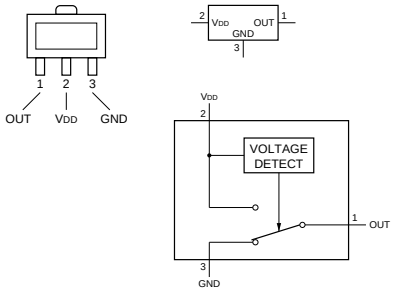


CONT. INPUT		ON CHANNEL
INH	A	
0	0	ch0
0	1	ch1
1	×	OPEN

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

S-8054ALR-LN-S (SEIKO I&E)4.30 – 4.60 V
S-8054ALR-LN-T1

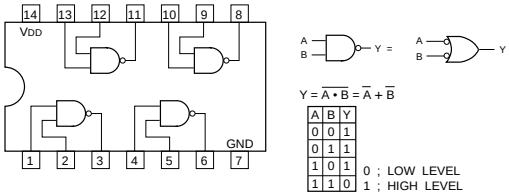
C-MOS VOLTAGE DETECTOR
—TOP VIEW—



ITEM	VOLTAGE DETECT (V)	OUTPUT TYPE
S-8051ANB	1.00 - 1.10	Nch
S-8051ANR	1.10 - 1.20	OPEN DRAIN
S-8052ALQ	2.40 - 2.60	C-MOS
S-8052ALY	2.60 - 2.80	
S-8053ALB	2.80 - 3.10	
S-8053ALR	3.10 - 3.40	
S-8054ALB	4.00 - 4.30	
S-8054ALR	4.30 - 4.60	
S-8054HN	3.80 - 4.20	Nch
S-8054HNM	4.50 - 4.70	OPEN DRAIN

TC74AC00FS(EL) B(TOSHIBA)FLAT PACKAGE(SMALL)

C-MOS QUAD 2-INPUT NAND GATES
—TOP VIEW—

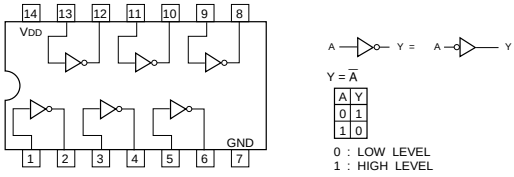


A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC74AC04FS-EL (TOSHIBA)FLAT PACKAGE(SMALL)

C-MOS HEX INVERTERS
—TOP VIEW—

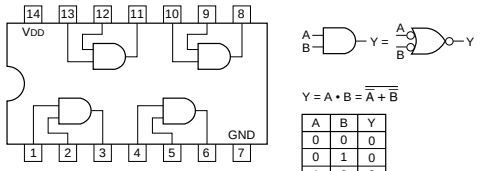


A	Y
0	1
1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC74AC08FS(EL) (TOSHIBA)

C-MOS QUAD 2-INPUT AND GATES
—TOP VIEW—

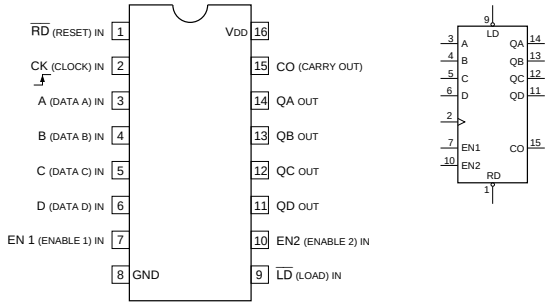


A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

TC74AC161F (TOSHIBA)

C-MOS SYNCHRONOUS PRESETTABLE 4-BIT BINARY COUNTER
—TOP VIEW—

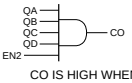


MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	×	×	×	RESET (ASYNCHRONOUS)
1	0	×	×	PRESET (SYNCHRONOUS)
1	1	0	×	NO COUNT
1	1	×	0	NO COUNT
1	1	1	1	COUNT

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

CARRY OUTPUT "CO"



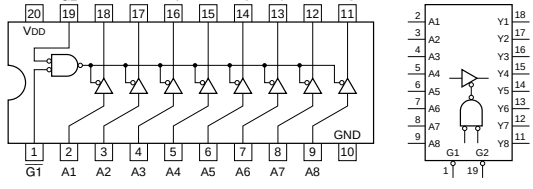
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

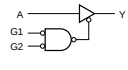
COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

TC74AC541FS(EL) (TOSHIBA)

C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS
—TOP VIEW—





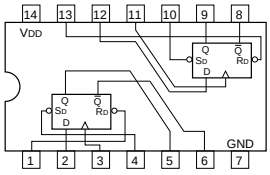
G1	G2	A	Y
0	0	0	0
0	0	1	1
1	×	×	HI-Z
×	1	×	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE
HI-Z : HIGH IMPEDANCE

TC74AC74FS(EL) (TOSHIBA)

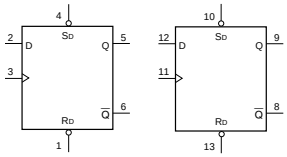
C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET

—TOP VIEW—



INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	CK	D	Qn+1	$\overline{Q_{n+1}}$
0	1	×	×	1	0
1	0	×	×	0	1
0	0	×	×	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	×	Qn	$\overline{Q_n}$

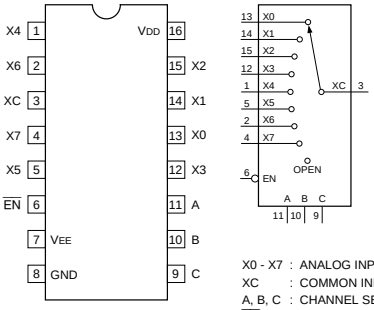
0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE



TC74HC4051AFS(EL) (TOSHIBA)

C-MOS 8-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER

—TOP VIEW—



X0 - X7 : ANALOG INPUTS/OUTPUTS
XC : COMMON INPUT/OUTPUT
A, B, C : CHANNEL SELECT INPUT
$\overline{EN}$: ENABLE INPUT

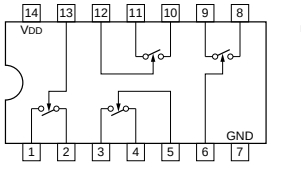
CONTROL INPUTS				SELECTED CHANNEL
EN	SELECT			
	C	B	A	
0	0	0	0	X0
0	0	0	1	X1
0	0	1	0	X2
0	0	1	1	X3
0	1	0	0	X4
0	1	0	1	X5
0	1	1	0	X6
0	1	1	1	X7
1	×	×	×	OPEN

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

TC74HC4066AFS (TOSHIBA)FLAT PACKAGE
TC74HC4066AFS-EL

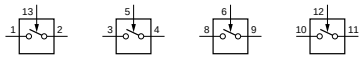
C-MOS BILATERAL ANALOG SWITCH

—TOP VIEW—



CONTROL	SWITCH
0	OFF
1	ON

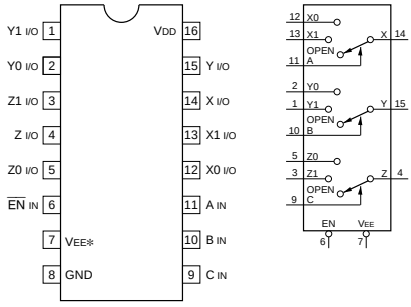
0 : LOW LEVEL
1 : HIGH LEVEL



TC74HC4053AFT(EL) (TOSHIBA)FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER

—TOP VIEW—



VEE* : VDD – VEE = +3 V to +12 V
VEE ≦ GND

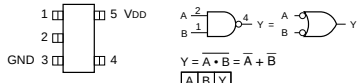
CONTROL INPUTS				ON CHANNEL		
EN	SELECT					
	C	B	A			
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	×	×	×	OPEN		

0 : LOW LEVEL
1 : HIGH LEVEL
× : DON'T CARE

TC7S00FU(TE85R) (TOSHIBA)CHIP PACKAGE

C-MOS 16-BIT MICROPROCESSOR

—TOP VIEW—



$Y = \overline{A \bullet B} = \overline{A} + \overline{B}$

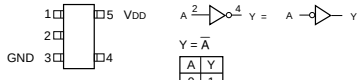
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7S04FU(TE85R) (TOSHIBA)FLAT PACKAGE

C-MOS INVERTER

—TOP VIEW—



$Y = \overline{A}$

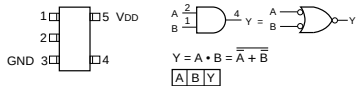
A	Y
0	1
1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC7S08FU(TE85R) (TOSHIBA)FLAT PACKAGE

C-MOS 2-INPUT AND GATE

—TOP VIEW—



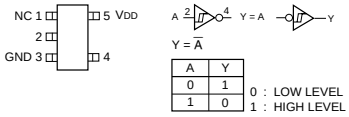
$Y = A \bullet B = \overline{\overline{A} + \overline{B}}$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

TC7S14FU(TE85R) (TOSHIBA)CHIP PACKAGE

C-MOS SCHMITT INVERTER
—TOP VIEW—

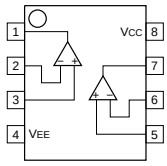


A	Y
0	1
1	0

0 : LOW LEVEL
1 : HIGH LEVEL

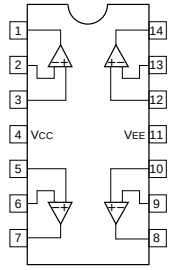
TL062CPW (TI)FLAT PACKAGE
TL062CPW-E05
TL082CPW-E05 (TI)FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIERS
(DUAL-SUPPLY TYPE)
—TOP VIEW—



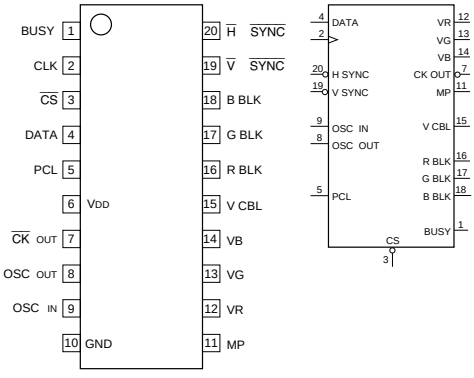
TL064CPW (TI)FLAT PACKAGE
TL064CPW-E05

OPERATIONAL AMPLIFIER
(J FET INPUT)
—TOP VIEW—



UPD6453GT-610 (NEC)FLAT PACKAGE
UPD6453GT-610-E2

C-MOS ON-SCREEN CHARACTER DISPLAY
—TOP VIEW—

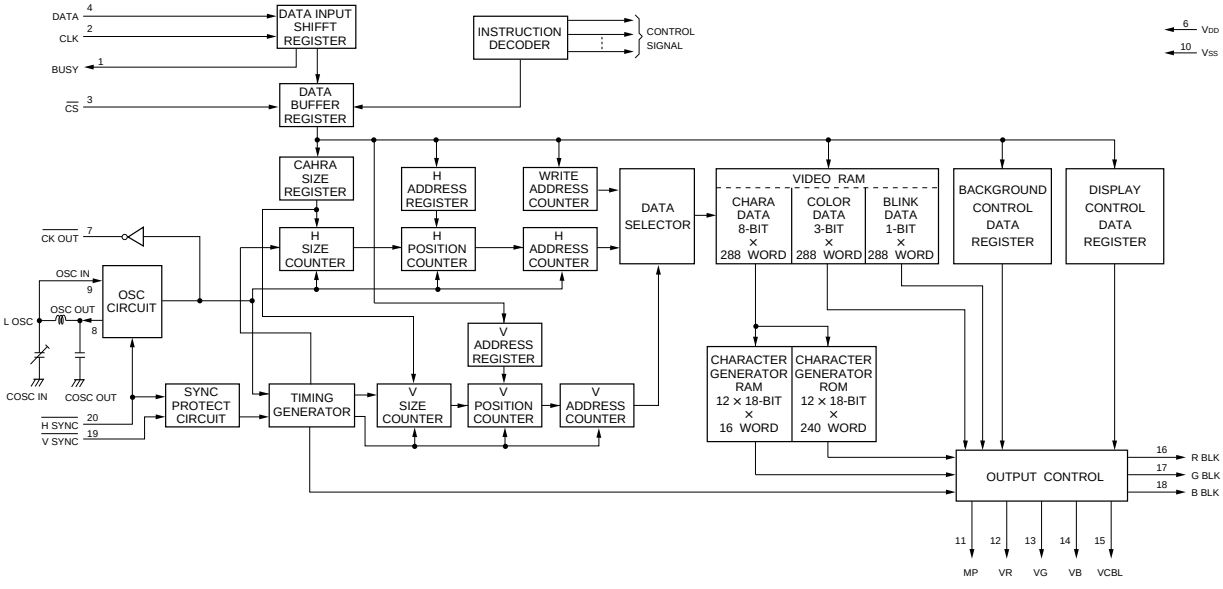


INPUT

CLK	: CLOCK
CS	: CHIP SELECT
DATA	: SERIAL DATA
H SYNC	: HORIZONTAL SYNC
OSC IN	: OSCILLATOR IN
PCL	: POWER ON CLEAR
V SYNC	: VERTICAL SYNC

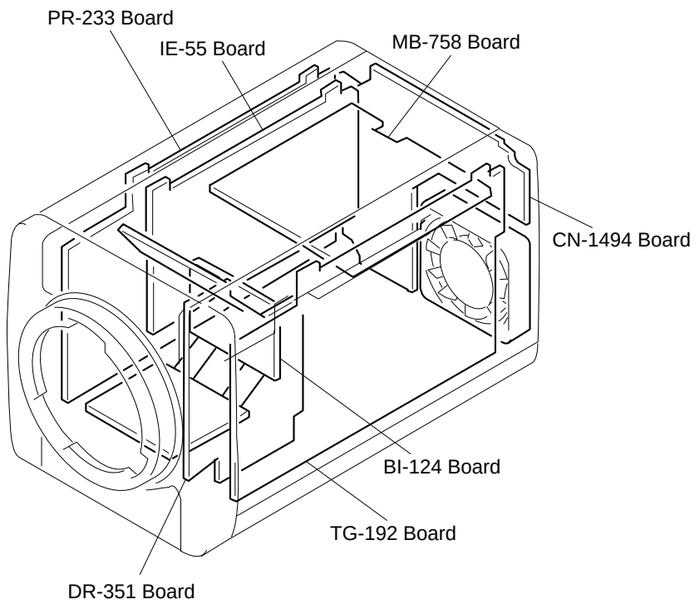
OUTPUT

BBLK, RBLK, GBLK	: B, R, G, BLANKING
BUSY	: BUSY OUT
CK OUT	: CLOCK
MP	: MASK PULSE
OSC OUT	: OSCILLATOR OUT
VR, VG, VB	: R, G, B, CHARACTER DATA
VCBL	: VIDEO CUT BLANKING

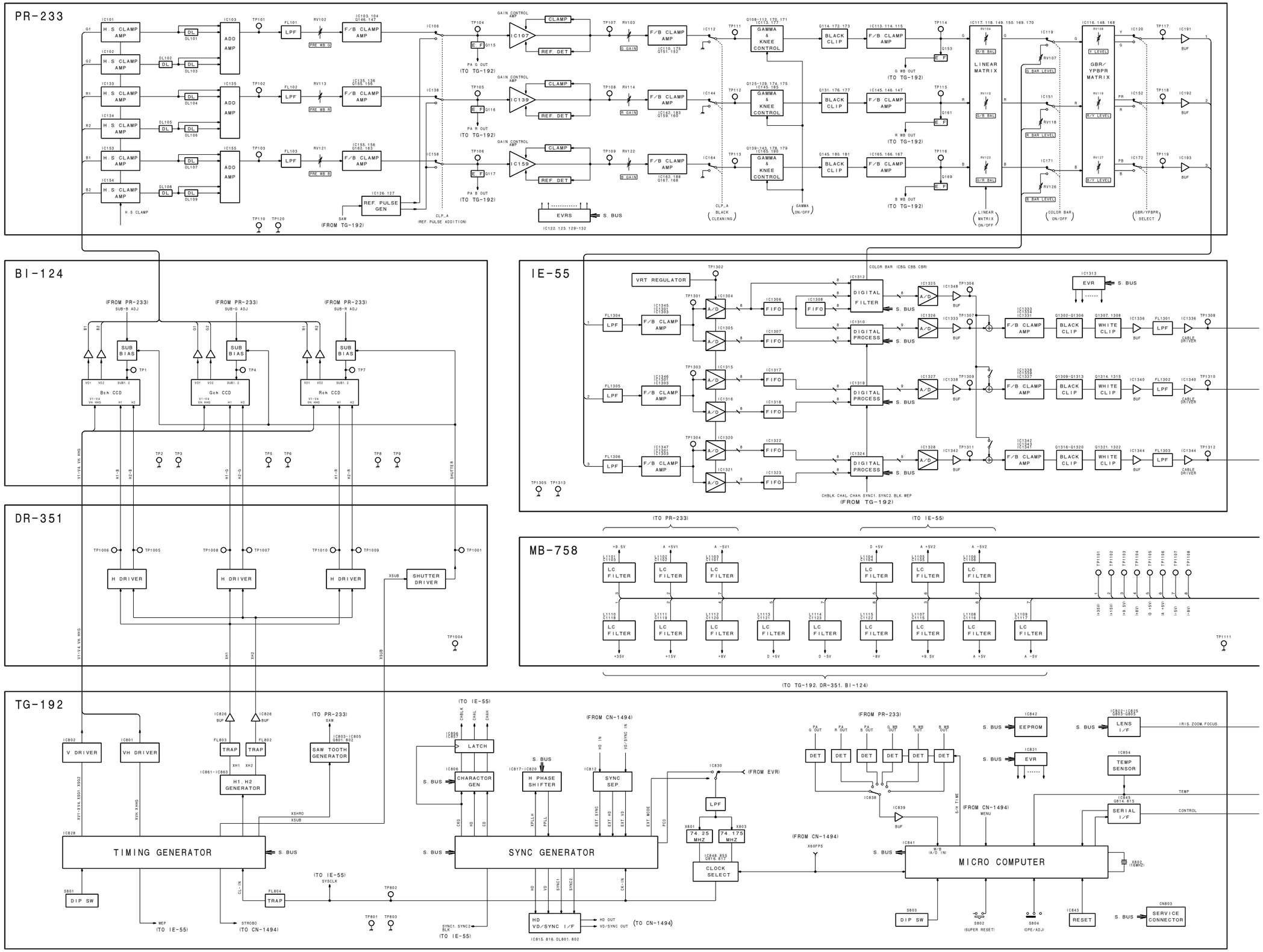


SECTION 7
DIAGRAMS

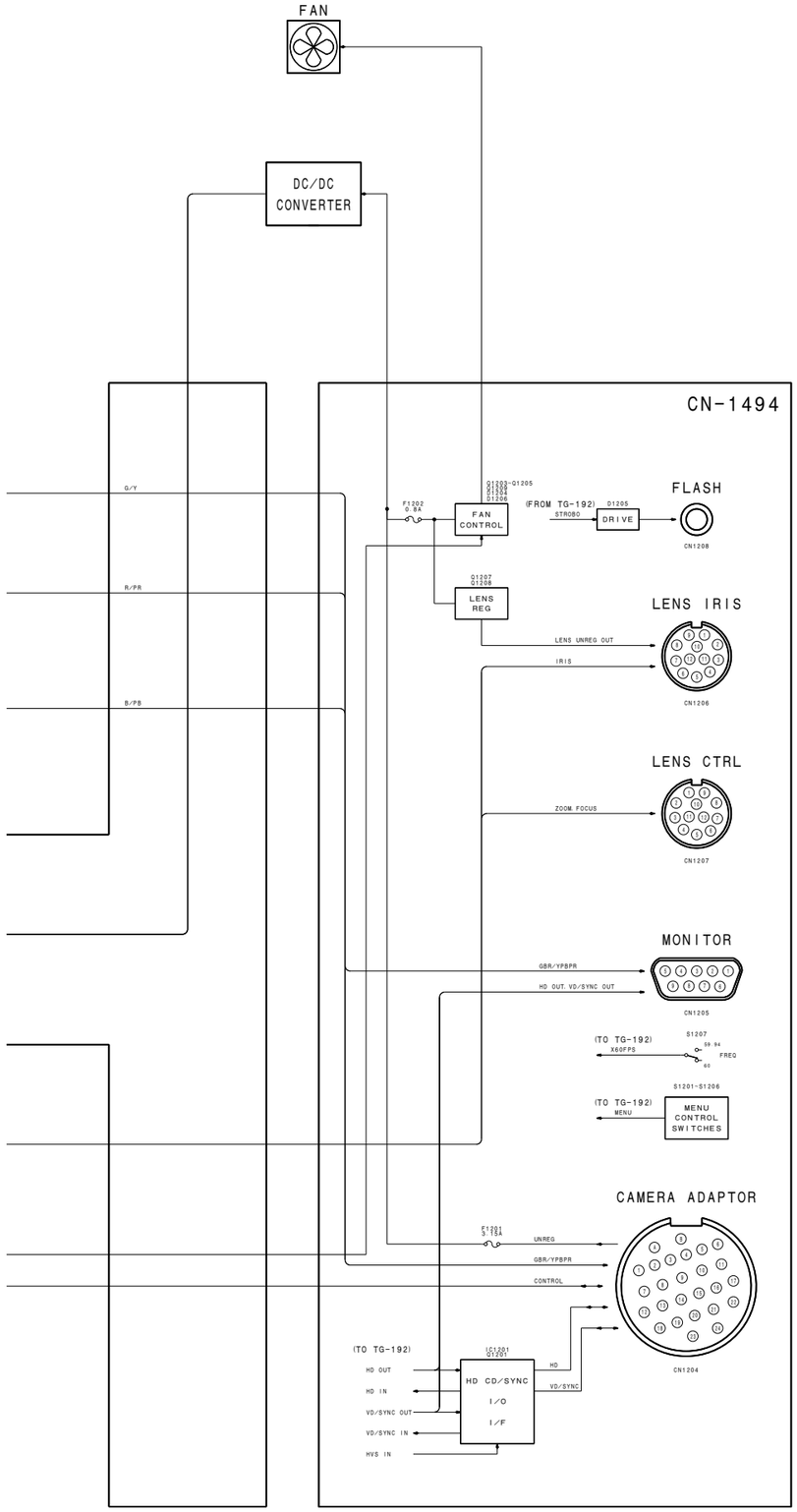
BOARD LOCATION



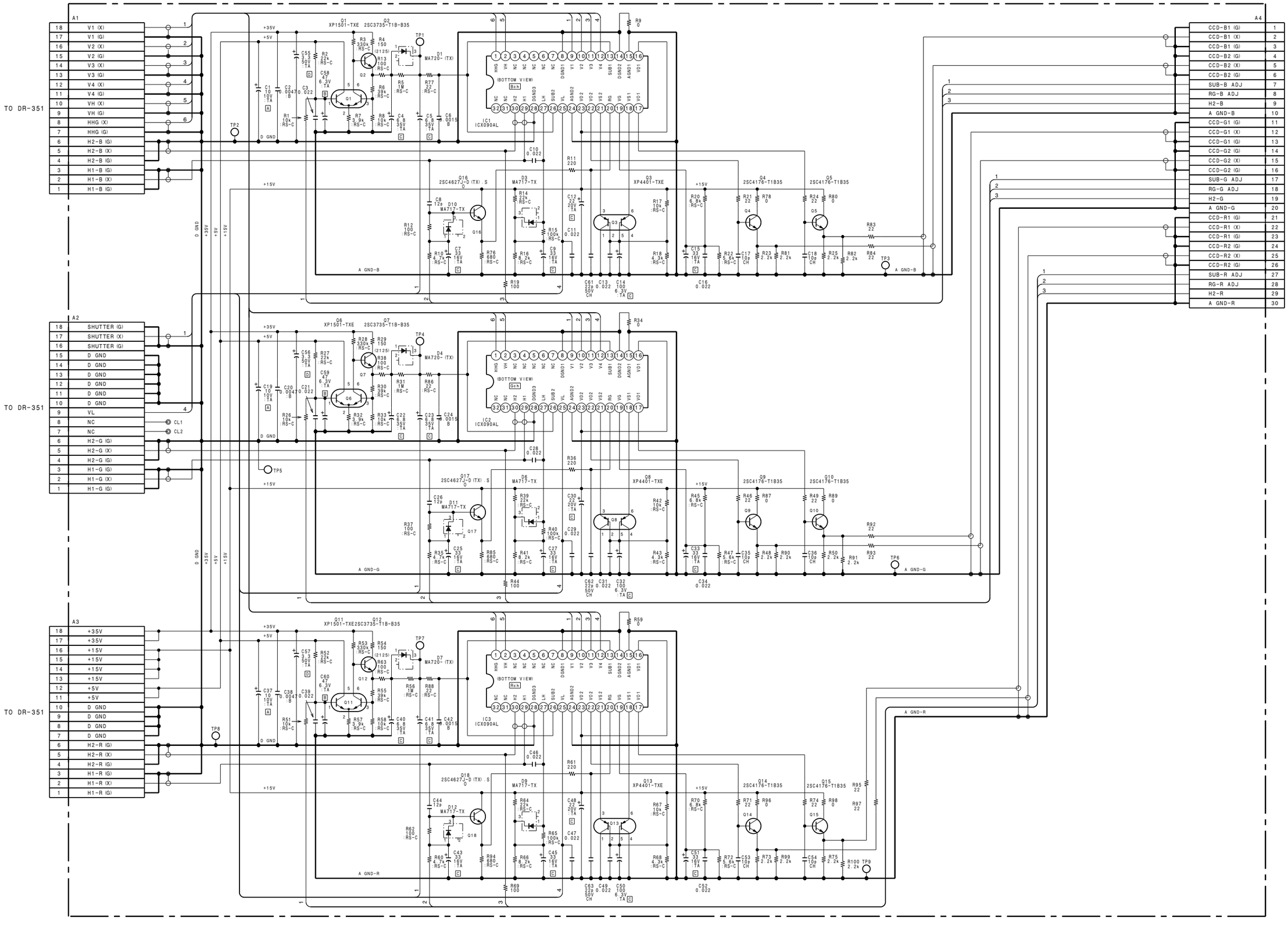
OVERALL BLOCK OVERALL BLOCK



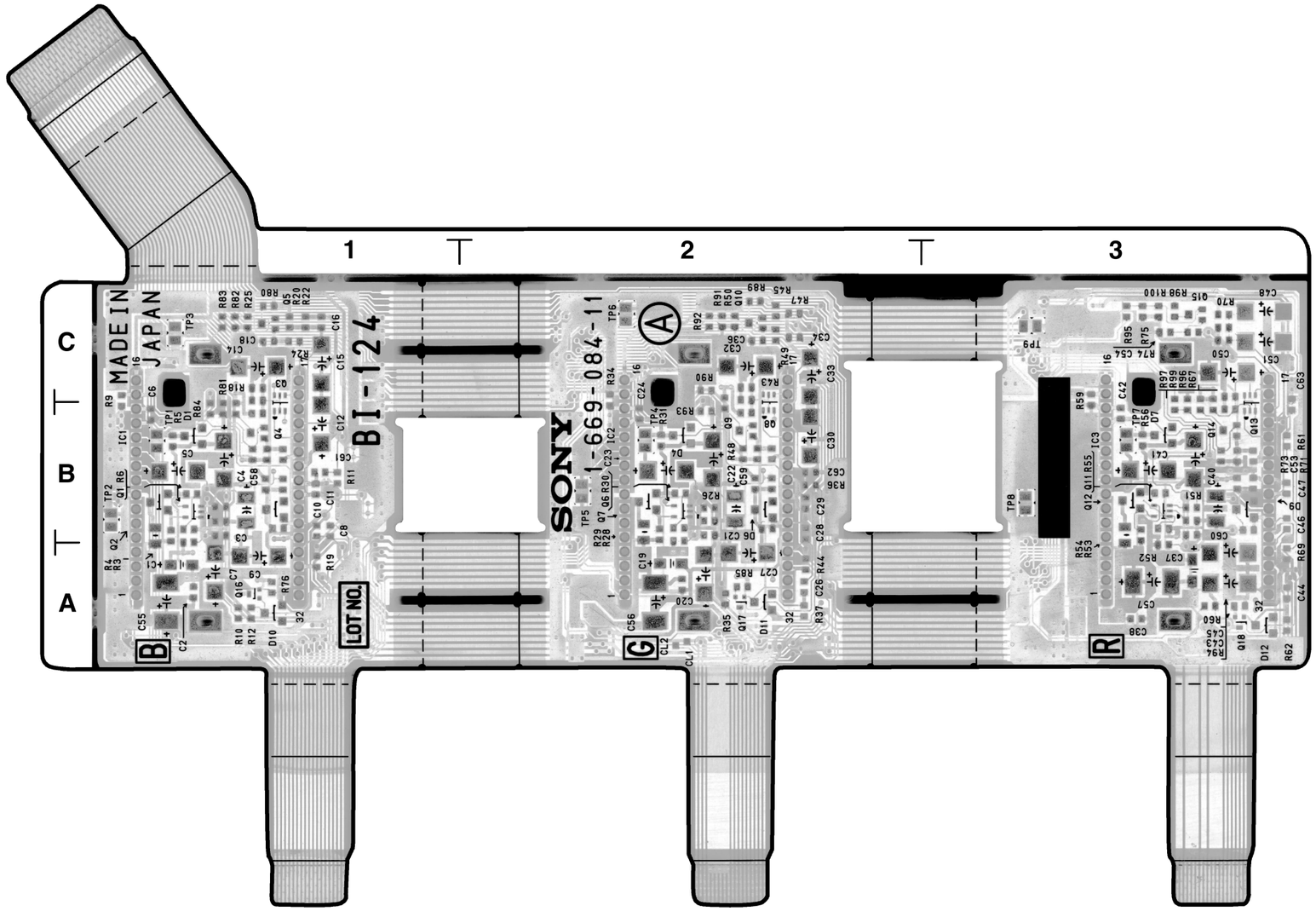
DXC-H10



OVERALL BLOCK

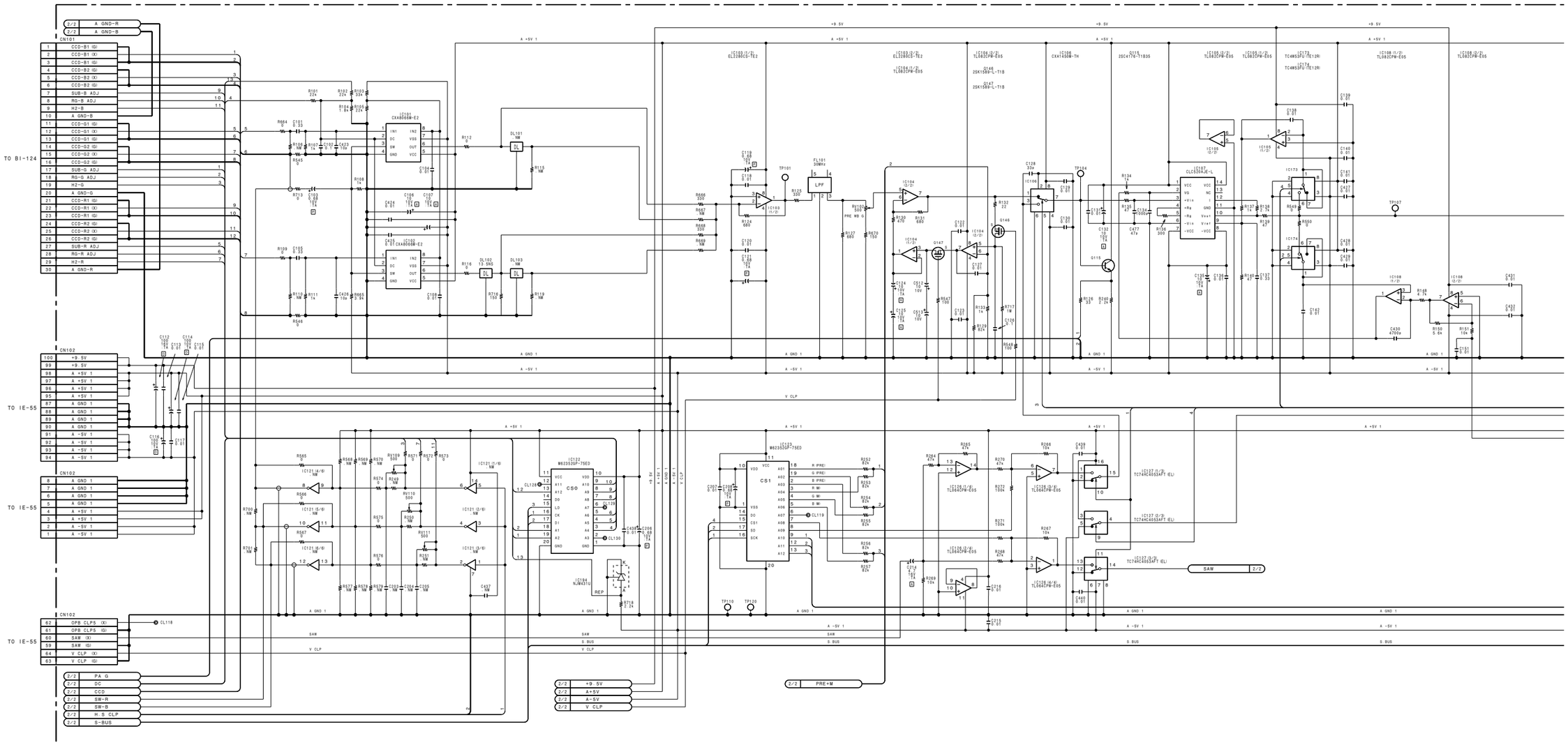

A1
18 V1 (X)
17 V1 (G)
16 V2 (X)
15 V2 (G)
14 V3 (X)
13 V3 (G)
12 V4 (X)
11 V4 (G)
10 VH (X)
9 VH (G)
8 HHG (X)
7 HHG (G)
6 H2-B (G)
5 H2-B (X)
4 H2-B (G)
3 H1-B (G)
2 H1-B (X)
1 H1-B (G)
TO DR-351
A2
18 SHUTTER (G)
17 SHUTTER (X)
16 SHUTTER (G)
15 D GND
14 D GND
13 D GND
12 D GND
11 D GND
10 D GND
9 VL
8 NC
7 NC
6 H2-G (G)
5 H2-G (X)
4 H2-G (G)
3 H1-G (G)
2 H1-G (X)
1 H1-G (G)
TO DR-351
A3
18 +35V
17 +35V
16 +15V
15 +15V
14 +15V
13 +15V
12 +5V
11 +5V
10 D GND
9 D GND
8 D GND
7 D GND
6 H2-R (G)
5 H2-R (X)
4 H2-R (G)
3 H1-R (G)
2 H1-R (X)
1 H1-R (G)
TO DR-351
A4
CCD-B1 (G) 1
CCD-B1 (X) 2
CCD-B1 (G) 3
CCD-B2 (G) 4
CCD-B2 (X) 5
CCD-B2 (G) 6
SUB-B ADJ 7
RG-B ADJ 8
H2-B 9
A GND-B 10
CCD-G1 (G) 11
CCD-G1 (X) 12
CCD-G1 (G) 13
CCD-G2 (G) 14
CCD-G2 (X) 15
CCD-G2 (G) 16
SUB-G ADJ 17
RG-G ADJ 18
H2-G 19
A GND-G 20
CCD-R1 (G) 21
CCD-R1 (X) 22
CCD-R1 (G) 23
CCD-R2 (G) 24
CCD-R2 (X) 25
CCD-R2 (G) 26
SUB-R ADJ 27
RG-R ADJ 28
H2-R 29
A GND-R 30
TO PR-233
IC1 ICX090AL
IC2 ICX090AL
IC3 ICX090AL
(BOTTOM VIEW)
Bch
Gch
Rch
Q1 XP1501-TXE
Q2 2SC3735-T1B-B35
Q3 XP4401-TXE
Q4 2SC4176-T1B35
Q5 2SC4176-T1B35
Q6 XP1501-TXE
Q7 2SC3735-T1B-B35
Q8 XP4401-TXE
Q9 2SC4176-T1B35
Q10 2SC4176-T1B35
Q11 XP1501-TXE
Q12 2SC3735-T1B-B35
Q13 XP4401-TXE
Q14 2SC4176-T1B35
Q15 2SC4176-T1B35
Q16 2SC4627J-D (TX) .S
Q17 2SC4627J-D (TX) .S
Q18 2SC4627J-D (TX) .S
D1 MA720- (TX)
D4 MA720- (TX)
D7 MA720- (TX)
D10 MA717-TX
D11 MA717-TX
D12 MA717-TX
D3 MA717-TX
D6 MA717-TX
D9 MA717-TX
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
CL1
CL2
D GND
A GND-B
A GND-G
A GND-R
+35V
+15V
+5V

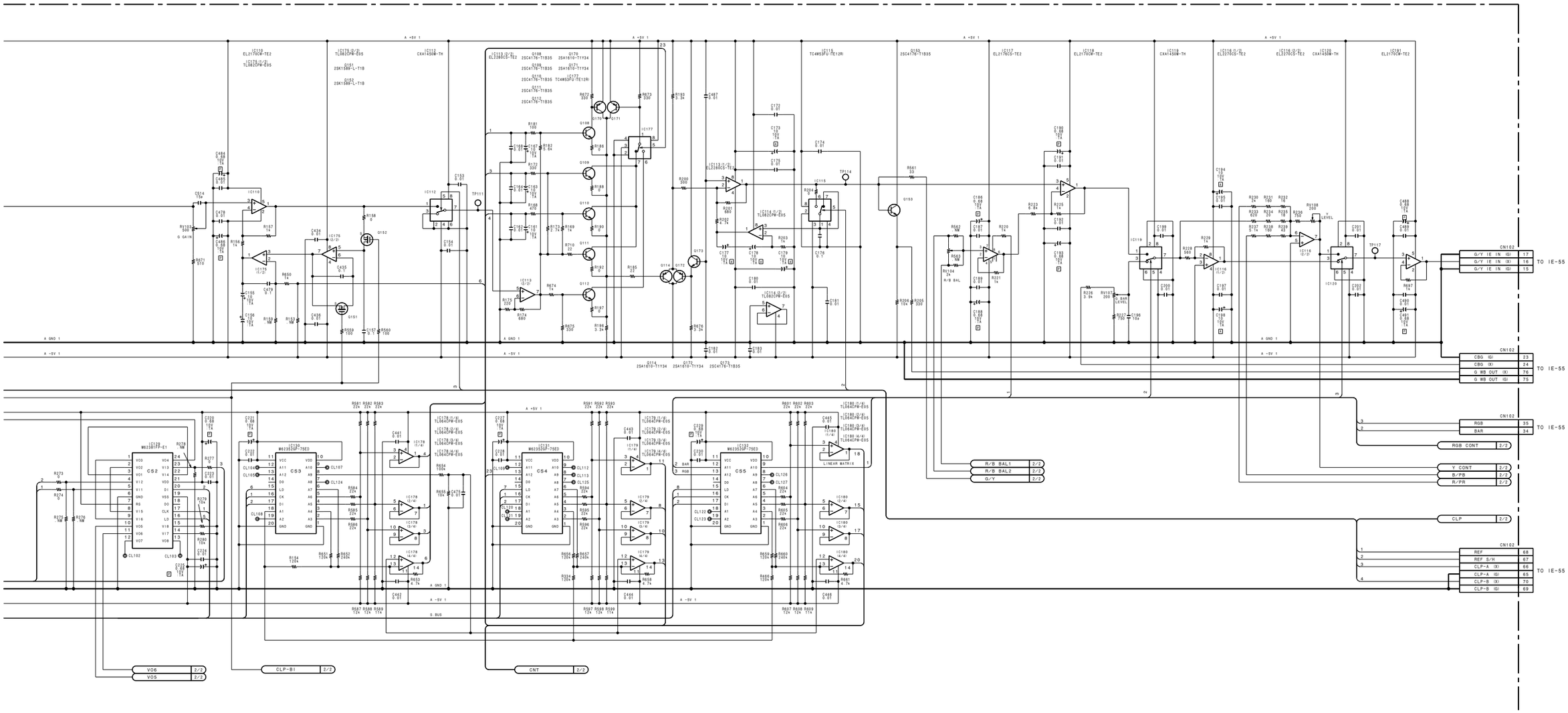
http://getMANUAL.com

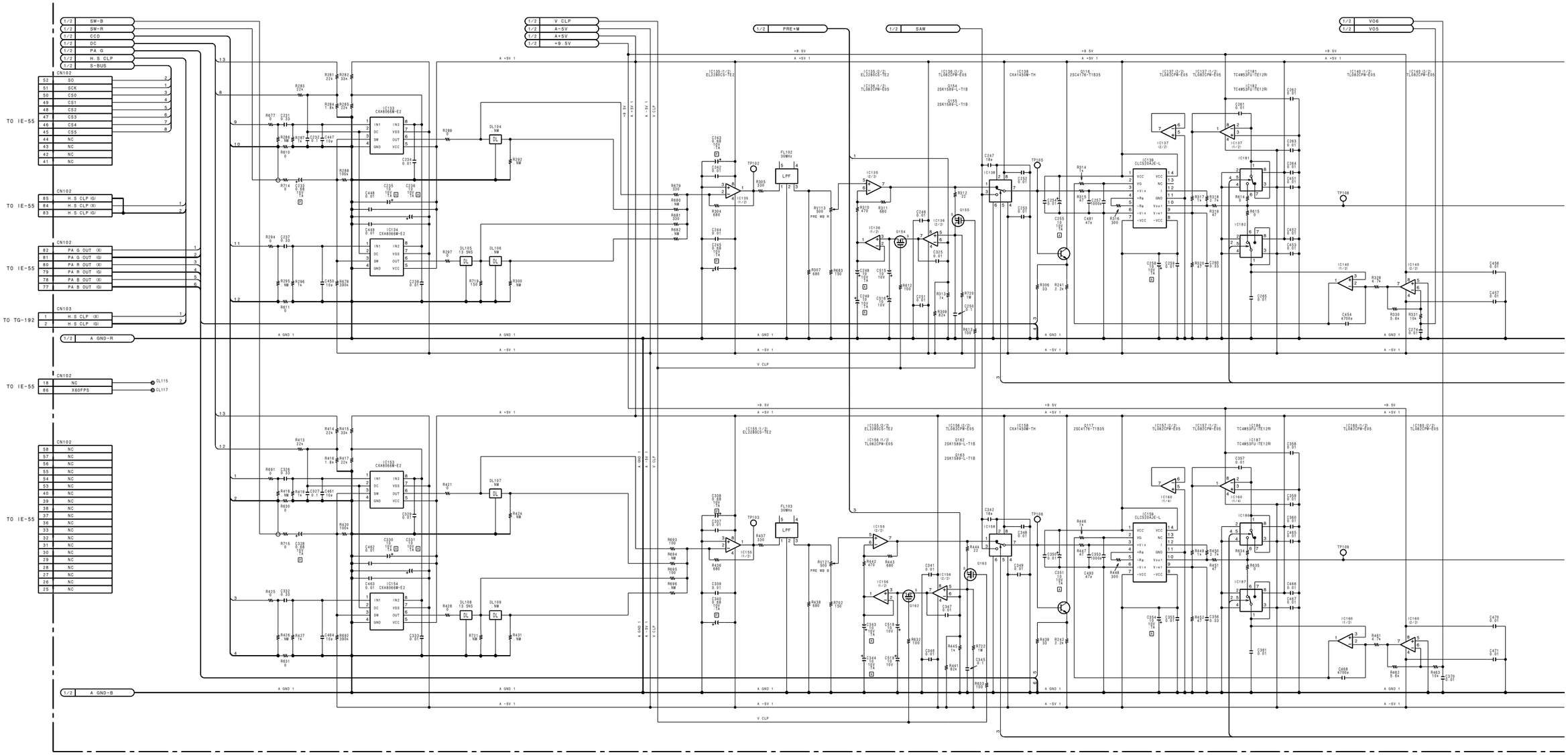


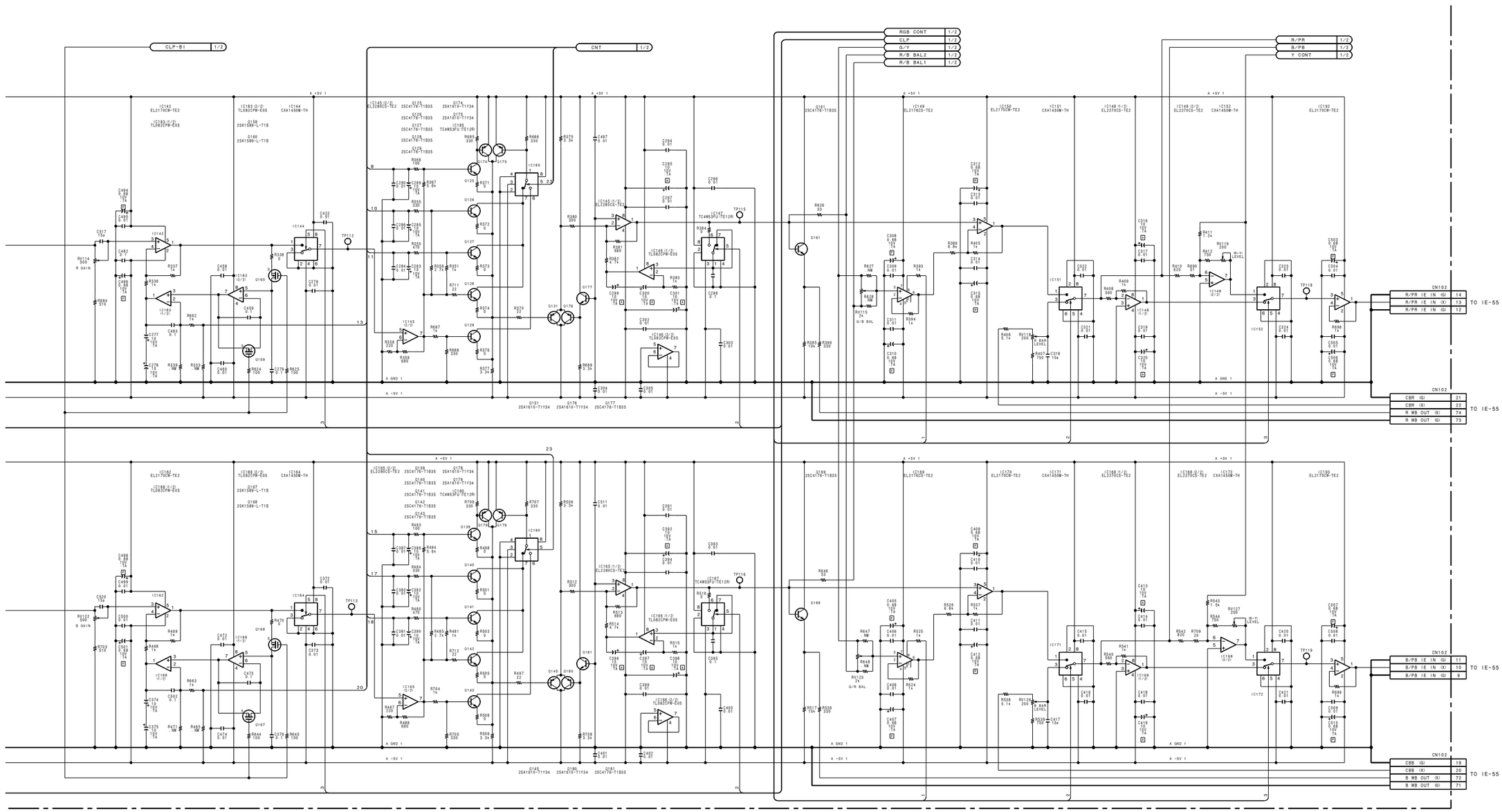
D1	B1
D3	B1
D4	B2
D6	B2
D7	B3
D9	B3
D10	A1
D11	A2
D12	A3
Q1	B1
Q2	B1
Q3	B1
Q4	B1
Q5	C1
Q6	B2
Q7	B2
Q8	B2
Q9	B2
Q10	C2
Q11	B3
Q12	B3
Q13	B3
Q14	B3
Q15	C3
Q16	A1
Q17	A2
Q18	A3
TP1	B1
TP2	B1
TP3	C1
TP4	B2
TP5	B2
TP6	C2
TP7	B3
TP8	B3
TP9	C3

BI-124 -A SIDE-
1-669-084-11


CN101
CCD-B1 (G)
CCD-B1 (X)
CCD-B1 (G)
CCD-B2 (G)
CCD-B2 (X)
CCD-B2 (G)
SUB-B ADJ
RG-B ADJ
H2-B
A GND-B
CCD-G1 (G)
CCD-G1 (X)
CCD-G1 (G)
CCD-G2 (G)
CCD-G2 (X)
CCD-G2 (G)
SUB-G ADJ
RG-G ADJ
H2-G
A GND-G
CCD-R1 (G)
CCD-R1 (X)
CCD-R1 (G)
CCD-R2 (G)
CCD-R2 (X)
CCD-R2 (G)
SUB-R ADJ
RG-R ADJ
H2-R
A GND-R
TO BI-124
CN102
+9.5V
A +5V 1
A GND 1
A -5V 1
TO IE-55
CN102
TO IE-55
CN102
OPB CLPS (X)
OPB CLPS (G)
SAW (X)
SAW (G)
V CLP (X)
V CLP (G)
TO IE-55
CL118
2/2 PA G
2/2 DC
2/2 CCD
2/2 SW-R
2/2 SW-B
2/2 H.S CLP
2/2 S-BUS
2/2 +9.5V
2/2 A+5V
2/2 A-5V
2/2 V CLP
2/2 PRE+M
SAW 2/2
IC102 CXA8066M-E2
IC103 CXA8066M-E2
IC120 M62355GP-75ED
IC121 NJM4051U
IC123 M62355GP-75ED
IC103 EL2280CS-T2
IC104 TL082CPW-E0S
IC105 TL082CPW-E0S
IC106 TL082CPW-E0S
IC108 TL082CPW-E0S
IC126 TL064CPW-E0S
IC127 TL064CPW-E0S
IC128 TL064CPW-E0S
Q146 2SK1580F-L-T1B
Q147 2SK1580F-L-T1B
Q115 2SC4172-T1B35
IC107 CLC5503AJE-L
IC172 TC4W53FU-TE12R
IC173 TC4W53FU-TE12R
IC174 TC4W53FU-TE12R
IC117 TC74HC4053AFT-EL
IC127 TC74HC4053AFT-EL
IC129 TC74HC4053AFT-EL
CS0
CS1
REP
LPF
FL101 30MHz
PRE WB G
TP101
TP104
TP107
TP110
TP120
CL119
CL139
DL101 NM
DL102 13.5NS
DL103 NM


CN102
G/Y IE IN (G) 17
G/Y IE IN (X) 16
G/Y IE IN (G) 15
TO IE-55
CN102
CBG (G) 23
CBG (X) 24
G WB OUT (X) 76
G WB OUT (G) 75
TO IE-55
CN102
RGB 35
BAR 34
TO IE-55
RGB CONT 2/2
Y CONT 2/2
B/PB 2/2
R/PR 2/2
CLP 2/2
CN102
REF 68
REF S/H 67
CLP-A (X) 66
CLP-A (G) 65
CLP-B (X) 70
CLP-B (G) 69
TO IE-55
R/B BAL1 2/2
R/B BAL2 2/2
G/Y 2/2
VO6 2/2
VO5 2/2
CLP-BI 2/2
CNT 2/2
LINEAR MATRIX
S BUS

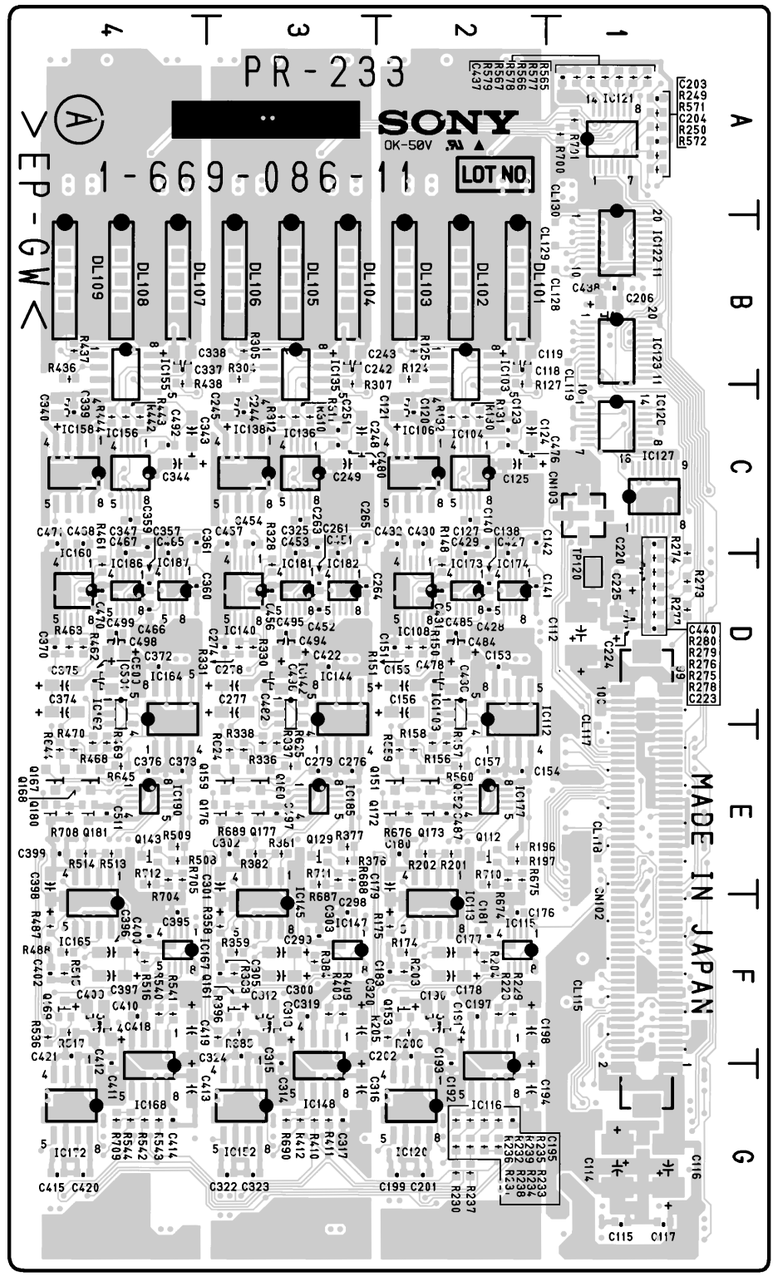

1/2 SW-B
1/2 SW-R
1/2 CCD
1/2 DC
1/2 PA G
1/2 H.S CLP
1/2 S-BUS
CN102
TO IE-55
CN103
TO TG-192
1/2 A GND-R
1/2 A GND-B
1/2 V CLP
1/2 A-5V
1/2 A+5V
1/2 +9.5V
1/2 PRE+M
1/2 SAW
1/2 VO6
1/2 VO5
X60FPS
A +5V 1
A -5V 1
A GND 1
V CLP
+9.5V
LPF
FL102 30MHz
FL103 30MHz
PRE WB R
PRE WB B


CLP-BI 1/2
CNT 1/2
RGB CONT 1/2
CLP 1/2
G/Y 1/2
R/B BAL2 1/2
R/B BAL1 1/2
R/PR 1/2
B/PB 1/2
Y CONT 1/2
CN102
R/PR IE IN (G) 14
R/PR IE IN (X) 13
R/PR IE IN (G) 12
TO IE-55
CBR (G) 21
CBR (X) 22
R WB OUT (X) 74
R WB OUT (G) 73
TO IE-55
B/PB IE IN (G) 11
B/PB IE IN (X) 10
B/PB IE IN (G) 9
TO IE-55
CBB (G) 19
CBB (X) 20
B WB OUT (X) 72
B WB OUT (G) 71
TO IE-55

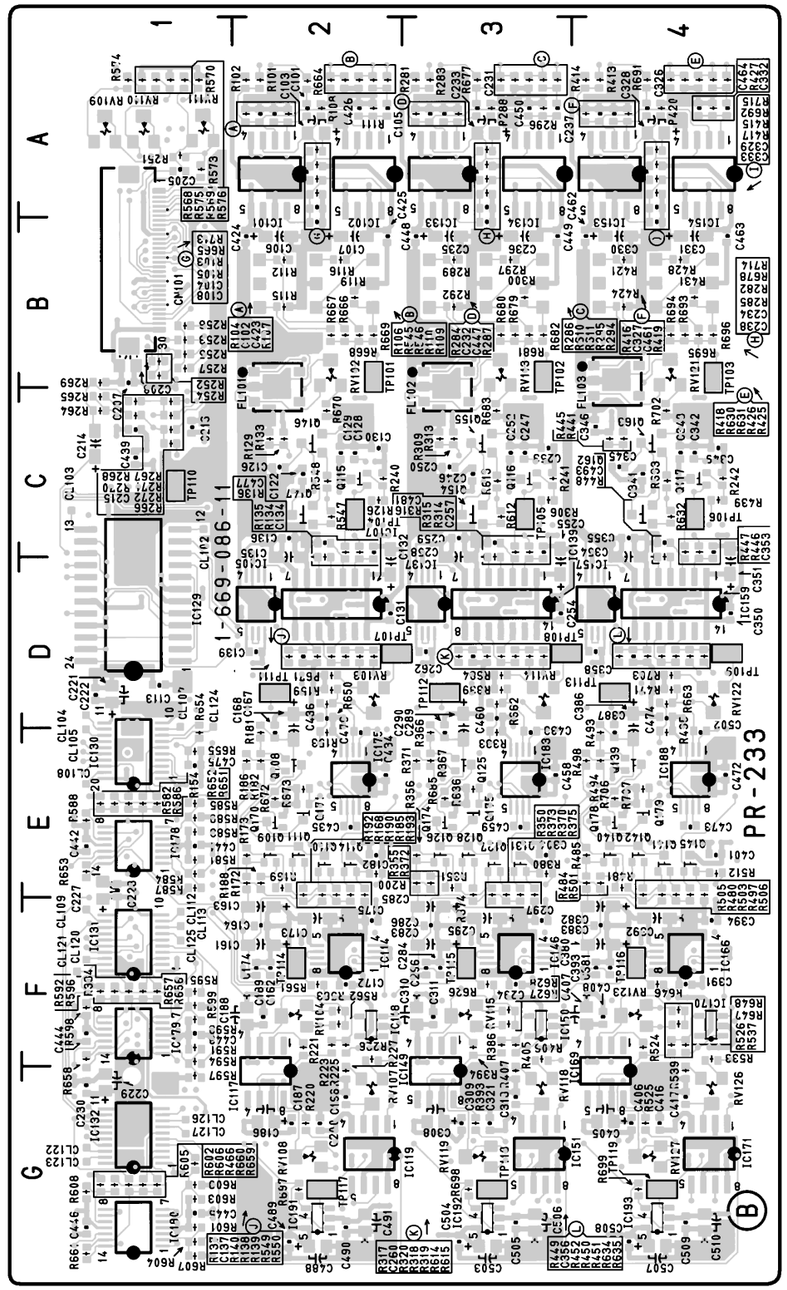
PR-233 (2/2)

*:B SIDE

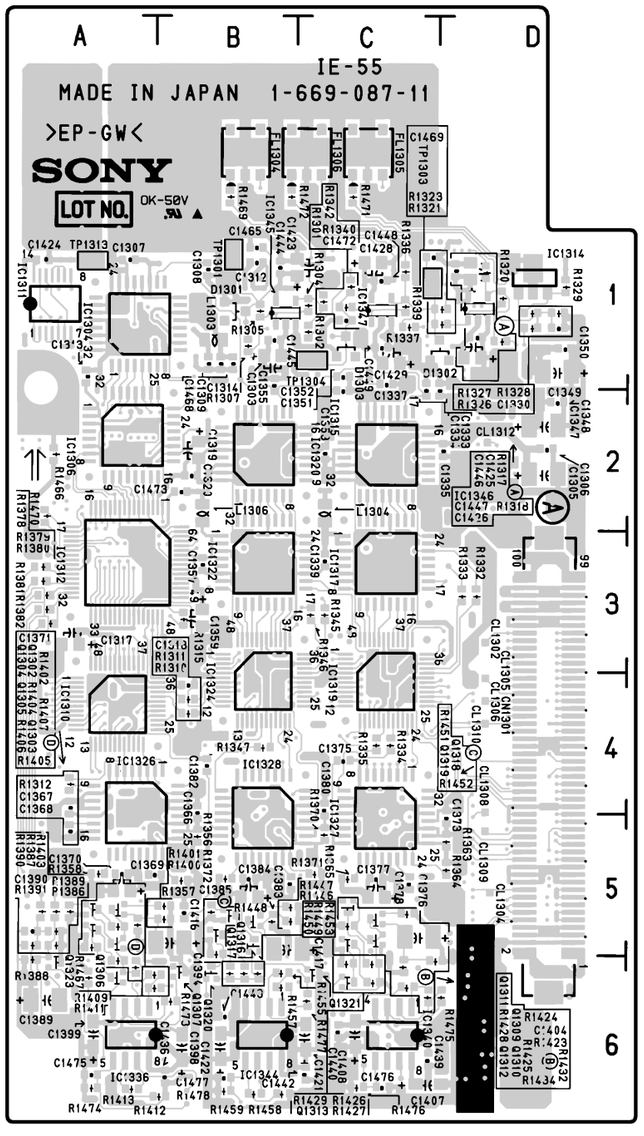
CN101	*B1	IC190	E4
CN102	E1	IC191	*G2
DL101	B2	IC192	*G3
DL102	B2	IC193	*G4
DL103	B2		
DL104	B3	Q108	*E2
DL105	B3	Q109	*E2
DL106	B3	Q110	*E2
DL107	B4	Q111	*E2
DL108	B4	Q112	E2
DL109	B4	Q114	*E2
		Q115	*C2
FL101	*B2	Q116	*C3
FL102	*B3	Q117	*C4
FL103	*B4	Q125	*E3
		Q126	*E3
IC101	*A2	Q127	*E3
IC102	*A2	Q128	*E3
IC103	B2	Q129	E3
IC104	C2	Q131	*E3
IC105	*D2	Q139	*E4
IC106	C2	Q140	*E4
IC107	*D2	Q141	*E4
IC108	D2	Q142	*E4
IC110	D2	Q143	E4
IC112	D2	Q145	*E4
IC113	F2	Q146	*C2
IC114	*F2	Q147	*C2
IC115	F2	Q151	E2
IC116	G2	Q152	E2
IC117	*G2	Q153	F2
IC118	*F2	Q154	*C3
IC119	*G2	Q155	*C3
IC120	G2	Q159	E3
IC122	B1	Q160	E3
IC123	B1	Q161	F3
IC126	C1	Q162	*C4
IC127	C1	Q163	*C4
IC129	*D1	Q167	E4
IC130	*E1	Q168	E4
IC131	*F1	Q169	F4
IC132	*G1	Q170	*E2
IC133	*A3	Q171	*E2
IC134	*A3	Q172	E2
IC135	B3	Q173	E2
IC136	C3	Q174	*E3
IC137	*D3	Q175	*E3
IC138	C3	Q176	E3
IC139	*D3	Q177	E3
IC140	D3	Q178	*E4
IC142	D3	Q179	*E4
IC144	D3	Q180	E4
IC145	F3	Q181	E4
IC146	*F3		
IC147	F3	RV102	*B2
IC148	G3	RV103	*D2
IC149	*G3	RV104	*F2
IC150	*F3	RV107	*G2
IC151	*G3	RV108	*G2
IC152	G3	RV113	*B3
IC153	*A4	RV114	*D3
IC154	*A4	RV115	*F3
IC155	B4	RV118	*G3
IC156	C4	RV119	*G3
IC157	*D4	RV121	*B4
IC158	C4	RV122	*D4
IC159	*D4	RV123	*F4
IC160	D4	RV126	*G4
IC162	D4	RV127	*G4
IC164	D4		
IC165	F4	TP101	*B2
IC166	*F4	TP102	*B3
IC167	F4	TP103	*B4
IC168	G4	TP104	*C2
IC169	*G4	TP105	*C3
IC170	*F4	TP106	*C4
IC171	*G4	TP107	*D2
IC172	G4	TP108	*D3
IC173	D2	TP109	*D4
IC174	D2	TP110	*C1
IC175	*E2	TP111	*D2
IC177	E2	TP112	*D3
IC178	*E1	TP113	*D4
IC179	*F1	TP114	*F2
IC180	*G1	TP115	*F3
IC181	D3	TP116	*F4
IC182	D3	TP117	*G2
IC183	*E3	TP118	*G3
IC185	E3	TP119	*G4
IC186	D4	TP120	D1
IC187	D4		
IC188	*E4		



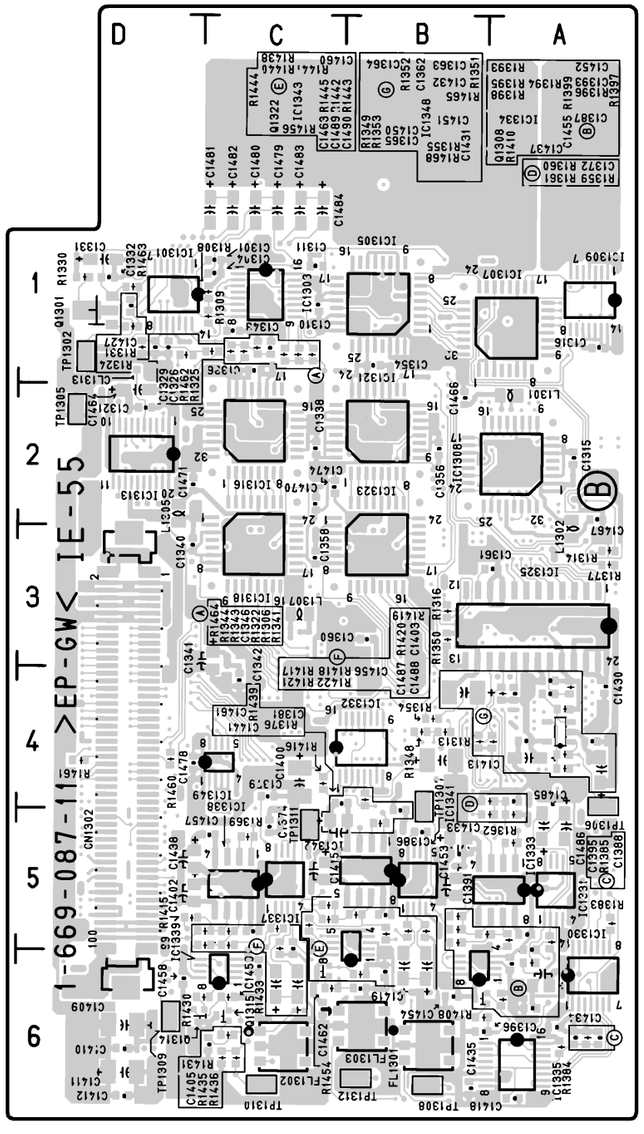
PR-233 -A SIDE-
1-669-086-11



PR-233 -B SIDE-
1-669-086-11



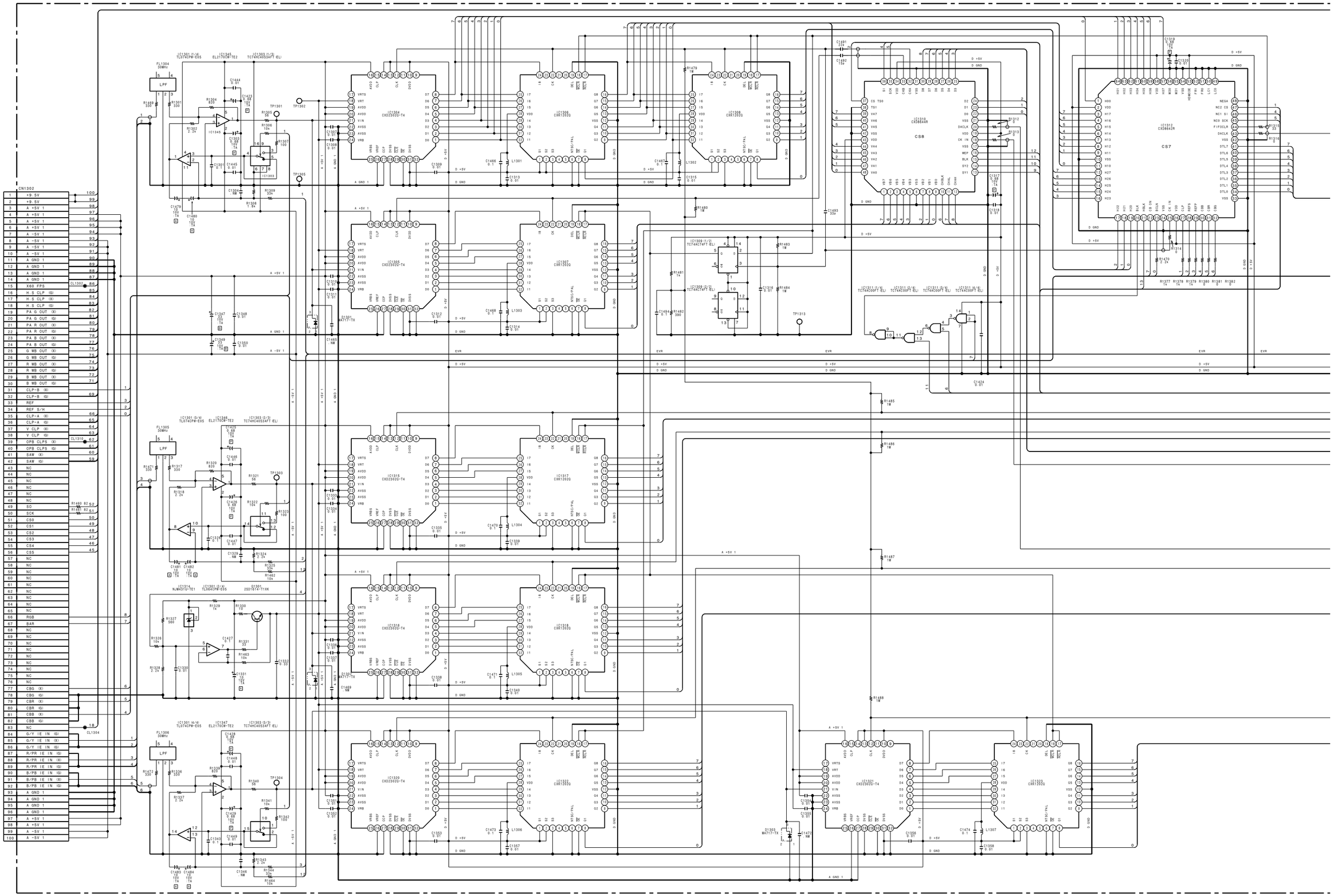
IE-55 -A SIDE-
1-669-087-11



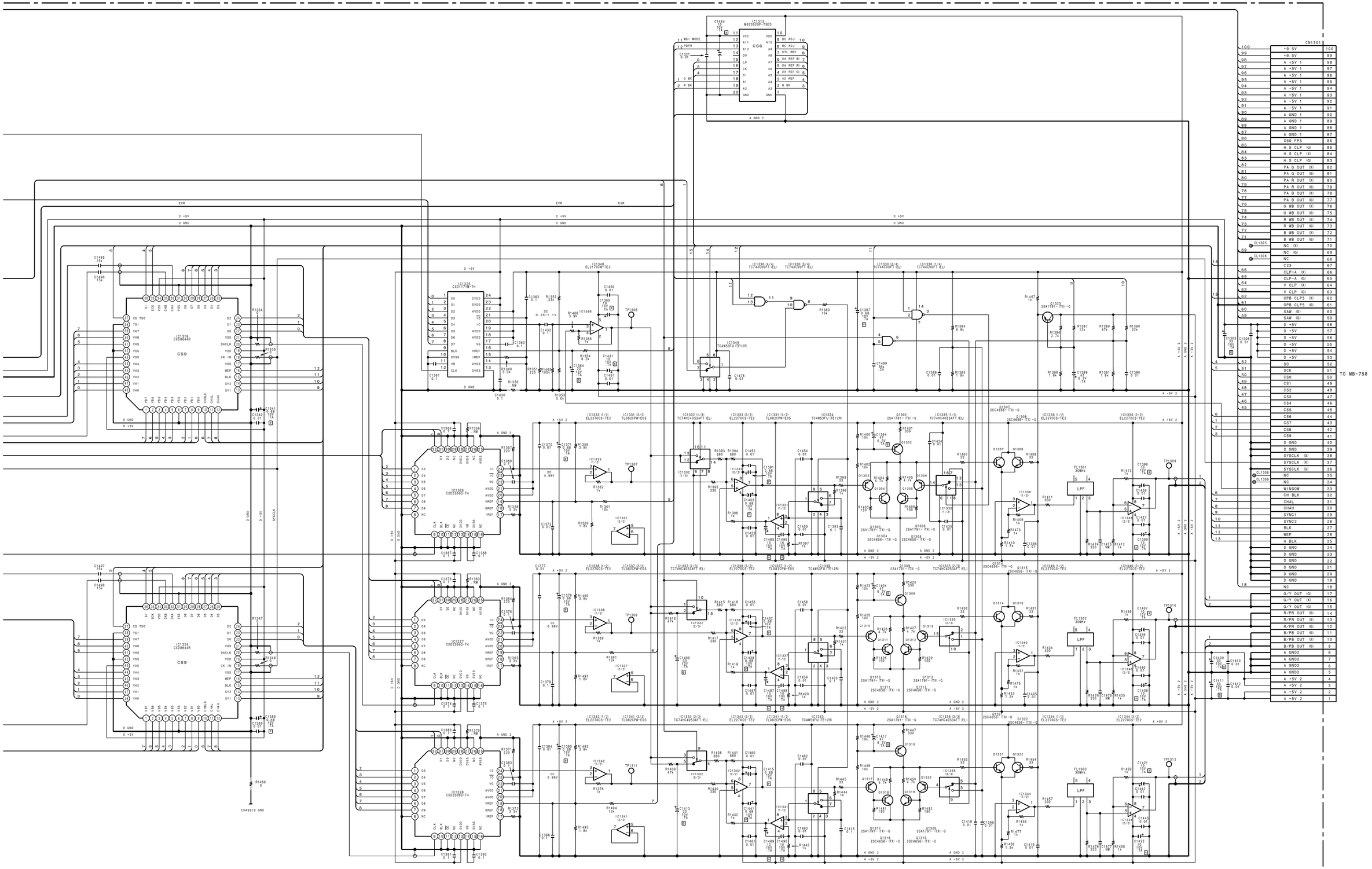
IE-55 -B SIDE-
1-669-087-11

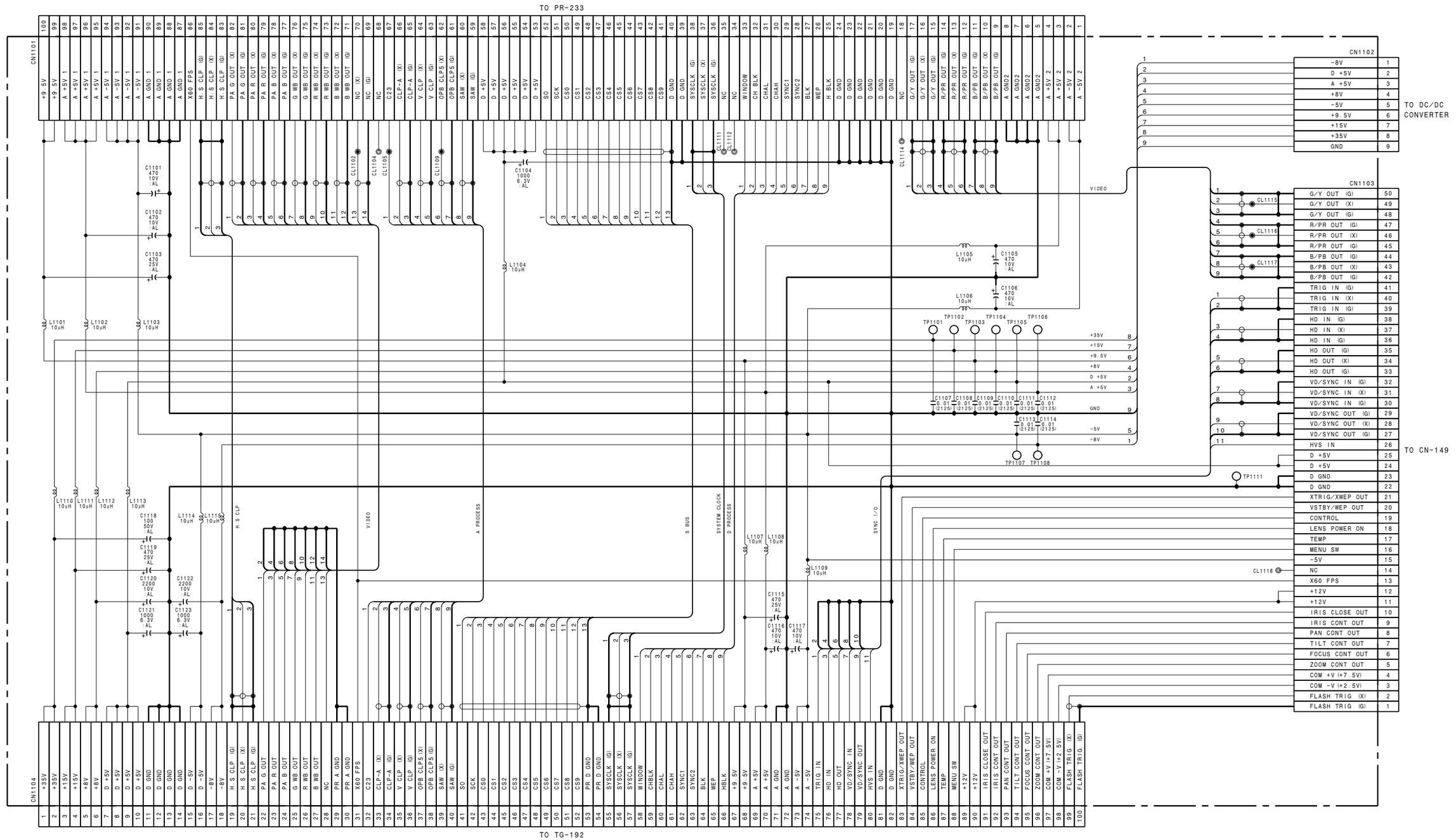
*:B SIDE

CN1301	D4	Q1306	A6	IC1316	*C2
CN1302	*D4	Q1307	B6	IC1317	C3
		Q1308	*B6	IC1318	*C3
D1301	B1	Q1309	C5	IC1319	C4
D1302	D1	Q1310	C5	IC1320	B2
D1303	C1	Q1311	C5	IC1321	*B2
		Q1312	C5	IC1322	B3
FL1301	*B6	Q1313	C6	IC1323	*B3
FL1302	*C6	Q1314	*C6	IC1324	B4
FL1303	*B6	Q1315	*C6	IC1325	*A3
FL1304	B1	Q1316	B5	IC1326	A4
FL1305	C1	Q1317	B5	IC1327	C5
FL1306	C1	Q1318	B5	IC1328	B5
		Q1319	B5	IC1330	*A6
IC1301	*D1	Q1320	B6	IC1331	*A5
IC1303	*C1	Q1321	C6	IC1332	*B4
IC1304	A1	Q1322	*C6	IC1333	*A5
IC1305	*B1	Q1323	A6	IC1334	*B6
IC1306	A2			IC1335	*A6
IC1307	*A1	TP1301	B1	IC1336	A6
IC1308	*A2	TP1302	*D1	IC1337	*C5
IC1309	*A1	TP1303	C1	IC1338	*C5
IC1310	A4	TP1304	C1	IC1339	*C6
IC1311	A1	TP1305	*D2	IC1340	C6
IC1312	A3	TP1306	*A4	IC1341	*B5
IC1313	*D2	TP1307	*B4	IC1342	*B5
IC1314	D1	TP1308	*B6	IC1343	*B5
IC1315	C2	TP1309	*D6	IC1344	B6
IC1316	*C2	TP1310	*C6	IC1345	B1
IC1317	C3	TP1311	*C5	IC1346	D1
IC1318	*C3	TP1312	*B6	IC1347	C1
IC1319	C4	TP1313	A1	IC1348	*A4
IC1320	B2			IC1349	*C4
IC1321	*B2				
IC1322	B3			L1301	*A2
IC1323	*B3			L1302	*A3
IC1324	B4			L1303	B1
IC1325	*A3			L1304	C2
IC1326	A4			L1305	*D2
IC1327	C5			L1306	B2
IC1328	B5			L1307	*C3
IC1330	*A6				
IC1331	*A5			Q1301	*D1
IC1332	*B4			Q1302	A5
IC1333	*A5			Q1303	A5
IC1334	*B6			Q1304	A5
IC1335	*A6			Q1305	A5
IC1336	A6				
IC1337	*C5				
IC1338	*C5				
IC1339	*C6				
IC1340	C6				
IC1341	*B5				
IC1342	*B5				
IC1343	*B5				
IC1344	B6				
IC1345	B1				
IC1346	D1				
IC1347	C1				
IC1348	*A4				
IC1349	*C4				


CN1302
+9.5V
A +5V 1
A -5V 1
A GND 1
X60 FPS
H.S CLP (G)
H.S CLP (X)
H.S CLP (G)
PA G OUT (X)
PA G OUT (G)
PA R OUT (X)
PA R OUT (G)
PA B OUT (X)
PA B OUT (G)
G WB OUT (X)
G WB OUT (G)
R WB OUT (X)
R WB OUT (G)
B WB OUT (X)
B WB OUT (G)
CLP-B (X)
CLP-B (G)
REF
REF S/H
CLP-A (X)
CLP-A (G)
V CLP (G)
OPB CLP5 (X)
OPB CLP5 (G)
SAW (X)
SAW (G)
NC
SCK
CS0
CS1
CS2
CS3
CS4
CS5
RGB
BAR
CBG (X)
CBG (G)
CBR (X)
CBR (G)
CBB (X)
CBB (G)
G/Y IE IN (G)
G/Y IE IN (X)
R/PR IE IN (G)
R/PR IE IN (X)
B/PB IE IN (G)
B/PB IE IN (X)
TO PR-233
IC1304 CXD2302Q-T4
IC1305 CXD2302Q-T4
IC1306 CXD2302Q-T4
IC1307 CXD2302Q-T4
IC1308 CXD2302Q-T4
IC1309 CXD2302Q-T4
IC1310 CXD2302Q-T4
IC1311 CXD2302Q-T4
IC1312 CXD8642R
IC1316 CXD8644R
CS7
CS8
EVR
D +5V
D GND
A +5V 1
A GND 1
A -5V 1

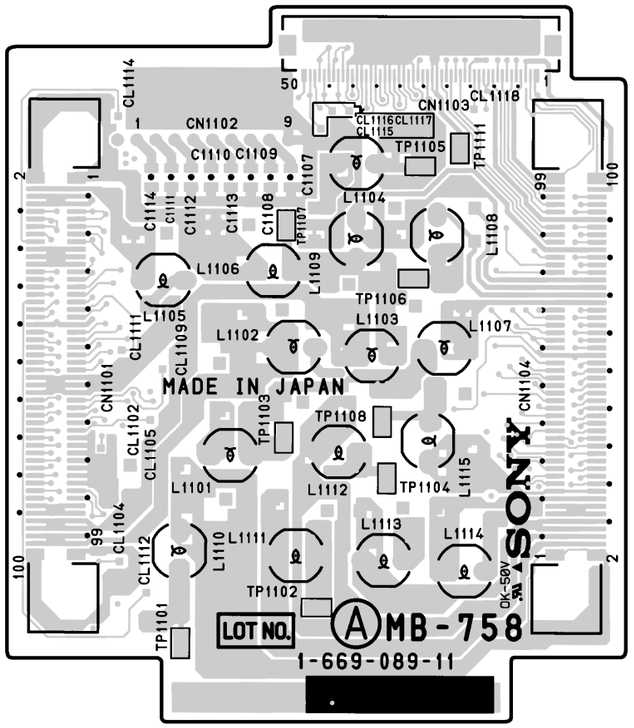
DXC-H10


CN1301
TO MB-758
CS6
CS9
IC1324 CX20644R
IC1325 CXD1175M-TH
IC1326 CXD2300Q-T4
IC1327 CXD2300Q-T4
IC1328 CXD2300Q-T4
IC1329 CXD2300Q-T4
CHASSIS GND
D +5V
D GND
A +5V 2
A GND 2
EVR
SYSCLK

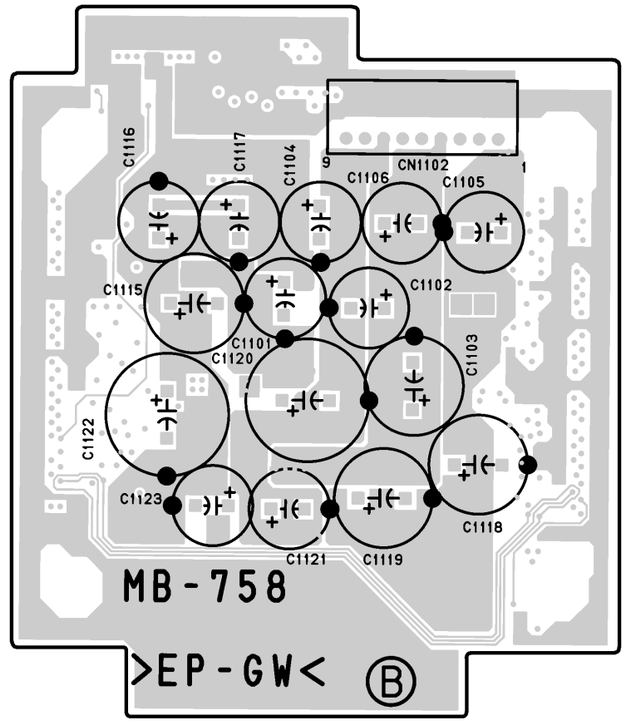

TO PR-233
CN1101
CN1102
-8V
D +5V
A +5V
+8V
-5V
+9.5V
+15V
+35V
GND
TO DC/DC CONVERTER
CN1103
G/Y OUT (G)
G/Y OUT (X)
G/Y OUT (G)
R/PR OUT (G)
R/PR OUT (X)
R/PR OUT (G)
B/PB OUT (G)
B/PB OUT (X)
B/PB OUT (G)
TRIG IN (G)
TRIG IN (X)
TRIG IN (G)
HD IN (G)
HD IN (X)
HD IN (G)
HD OUT (G)
HD OUT (X)
HD OUT (G)
VD/SYNC IN (G)
VD/SYNC IN (X)
VD/SYNC IN (G)
VD/SYNC OUT (G)
VD/SYNC OUT (X)
VD/SYNC OUT (G)
HVS IN
D +5V
D +5V
D GND
D GND
XTRIG/XWEP OUT
VSTBY/WEP OUT
CONTROL
LENS POWER ON
TEMP
MENU SW
-5V
NC
X60 FPS
+12V
+12V
IRIS CLOSE OUT
IRIS CONT OUT
PAN CONT OUT
TILT CONT OUT
FOCUS CONT OUT
ZOOM CONT OUT
COM +V (+7.5V)
COM -V (+2.5V)
FLASH TRIG (X)
FLASH TRIG (G)
TO CN-149
CN1104
TO TG-192
VIDEO
H S CLP
A PROCESS
S BUS
SYSTEM CLOCK
D PROCESS
SYNC I/O

MB-758

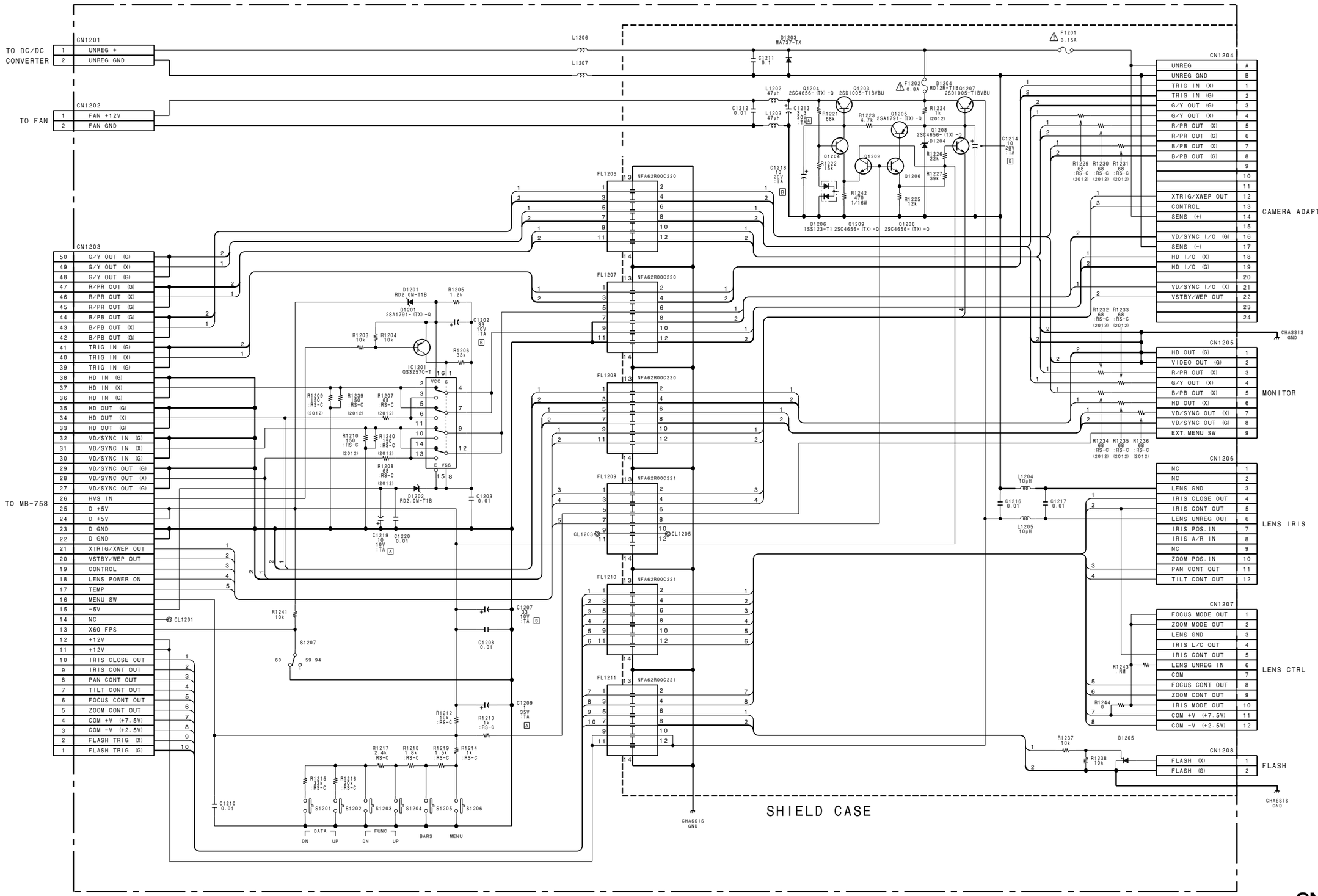
http://getMANUAL.com

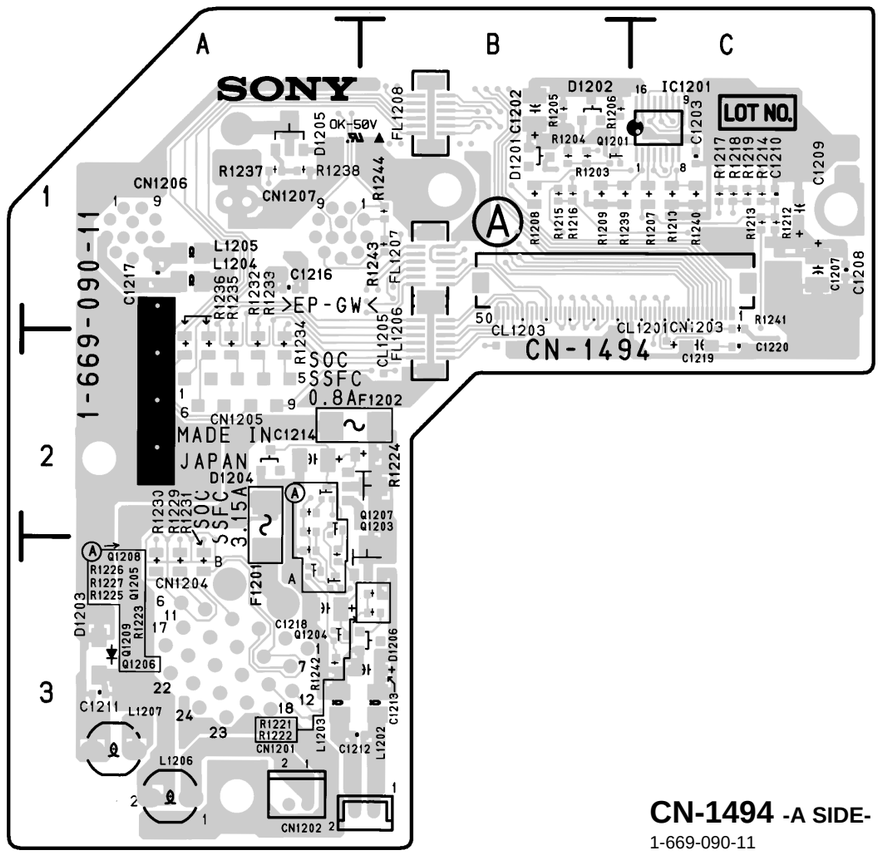


MB-758 -A SIDE-
1-669-089-11



MB-758 -B SIDE-
1-669-089-11

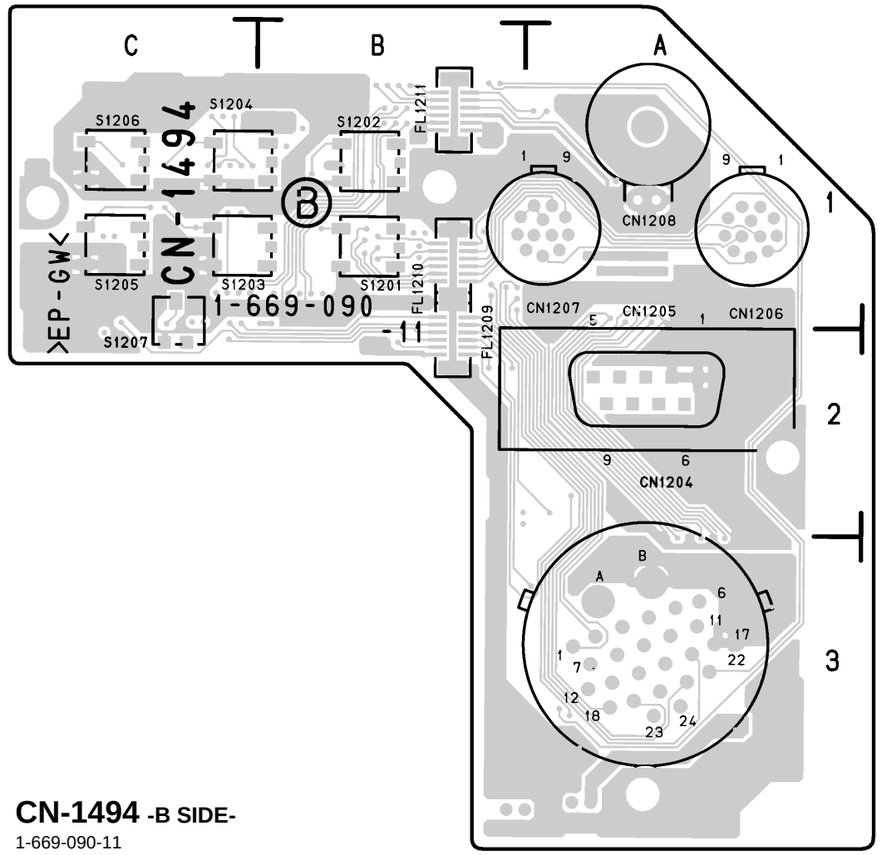

CN1201
1 UNREG +
2 UNREG GND
TO DC/DC CONVERTER
CN1202
1 FAN +12V
2 FAN GND
TO FAN
CN1203
50 G/Y OUT (G)
49 G/Y OUT (X)
48 G/Y OUT (G)
47 R/PR OUT (G)
46 R/PR OUT (X)
45 R/PR OUT (G)
44 B/PB OUT (G)
43 B/PB OUT (X)
42 B/PB OUT (G)
41 TRIG IN (G)
40 TRIG IN (X)
39 TRIG IN (G)
38 HD IN (G)
37 HD IN (X)
36 HD IN (G)
35 HD OUT (G)
34 HD OUT (X)
33 HD OUT (G)
32 VD/SYNC IN (G)
31 VD/SYNC IN (X)
30 VD/SYNC IN (G)
29 VD/SYNC OUT (G)
28 VD/SYNC OUT (X)
27 VD/SYNC OUT (G)
26 HVS IN
25 D +5V
24 D +5V
23 D GND
22 D GND
21 XTRIG/XWEP OUT
20 VSTBY/WEP OUT
19 CONTROL
18 LENS POWER ON
17 TEMP
16 MENU SW
15 -5V
14 NC
13 X60 FPS
12 +12V
11 +12V
10 IRIS CLOSE OUT
9 IRIS CONT OUT
8 PAN CONT OUT
7 TILT CONT OUT
6 FOCUS CONT OUT
5 ZOOM CONT OUT
4 COM +V (+7.5V)
3 COM -V (+2.5V)
2 FLASH TRIG (X)
1 FLASH TRIG (G)
TO MB-758
CL1201
L1206
L1207
D1203 MA737-TX
F1201 3.15A
F1202 0.8A
D1204 RD12M-T1B
Q1201 2SA1791-(TX)-Q
Q1202 2SD1005-T1BVBU
Q1203 2SD1005-T1BVBU
Q1204 2SC4656-(TX)-Q
Q1205 2SA1791-(TX)-Q
Q1206 2SC4656-(TX)-Q
Q1207 2SC4656-(TX)-Q
Q1208 2SC4656-(TX)-Q
Q1209 2SC4656-(TX)-Q
D1206 1SS123-T1
D1201 RD2.0M-T1B
D1202 RD2.0M-T1B
D1205
IC1201 QS3257Q-T
FL1206 NFA62R00C220
FL1207 NFA62R00C220
FL1208 NFA62R00C220
FL1209 NFA62R00C221
FL1210 NFA62R00C221
FL1211 NFA62R00C221
CL1203
CL1205
S1201
S1202
S1203
S1204
S1205
S1206
S1207
DATA DN UP
FUNC DN UP
BARS
MENU
CN1204
UNREG A
UNREG GND B
TRIG IN (X) 1
TRIG IN (G) 2
G/Y OUT (G) 3
G/Y OUT (X) 4
R/PR OUT (X) 5
R/PR OUT (G) 6
B/PB OUT (X) 7
B/PB OUT (G) 8
XTRIG/XWEP OUT 12
CONTROL 13
SENS (+) 14
VD/SYNC I/O (G) 16
SENS (-) 17
HD I/O (X) 18
HD I/O (G) 19
VD/SYNC I/O (X) 21
VSTBY/WEP OUT 22
CAMERA ADAPTOR
CHASSIS GND
CN1205
HD OUT (G) 1
VIDEO OUT (G) 2
R/PR OUT (X) 3
G/Y OUT (X) 4
B/PB OUT (X) 5
HD OUT (X) 6
VD/SYNC OUT (X) 7
VD/SYNC OUT (G) 8
EXT.MENU SW 9
MONITOR
CN1206
NC 1
NC 2
LENS GND 3
IRIS CLOSE OUT 4
IRIS CONT OUT 5
LENS UNREG OUT 6
IRIS POS.IN 7
IRIS A/R IN 8
NC 9
ZOOM POS.IN 10
PAN CONT OUT 11
TILT CONT OUT 12
LENS IRIS
CN1207
FOCUS MODE OUT 1
ZOOM MODE OUT 2
LENS GND 3
IRIS L/C OUT 4
IRIS CONT OUT 5
LENS UNREG IN 6
COM 7
FOCUS CONT OUT 8
ZOOM CONT OUT 9
IRIS MODE OUT 10
COM +V (+7.5V) 11
COM -V (+2.5V) 12
LENS CTRL
CN1208
FLASH (X) 1
FLASH (G) 2
FLASH
SHIELD CASE
CHASSIS GND



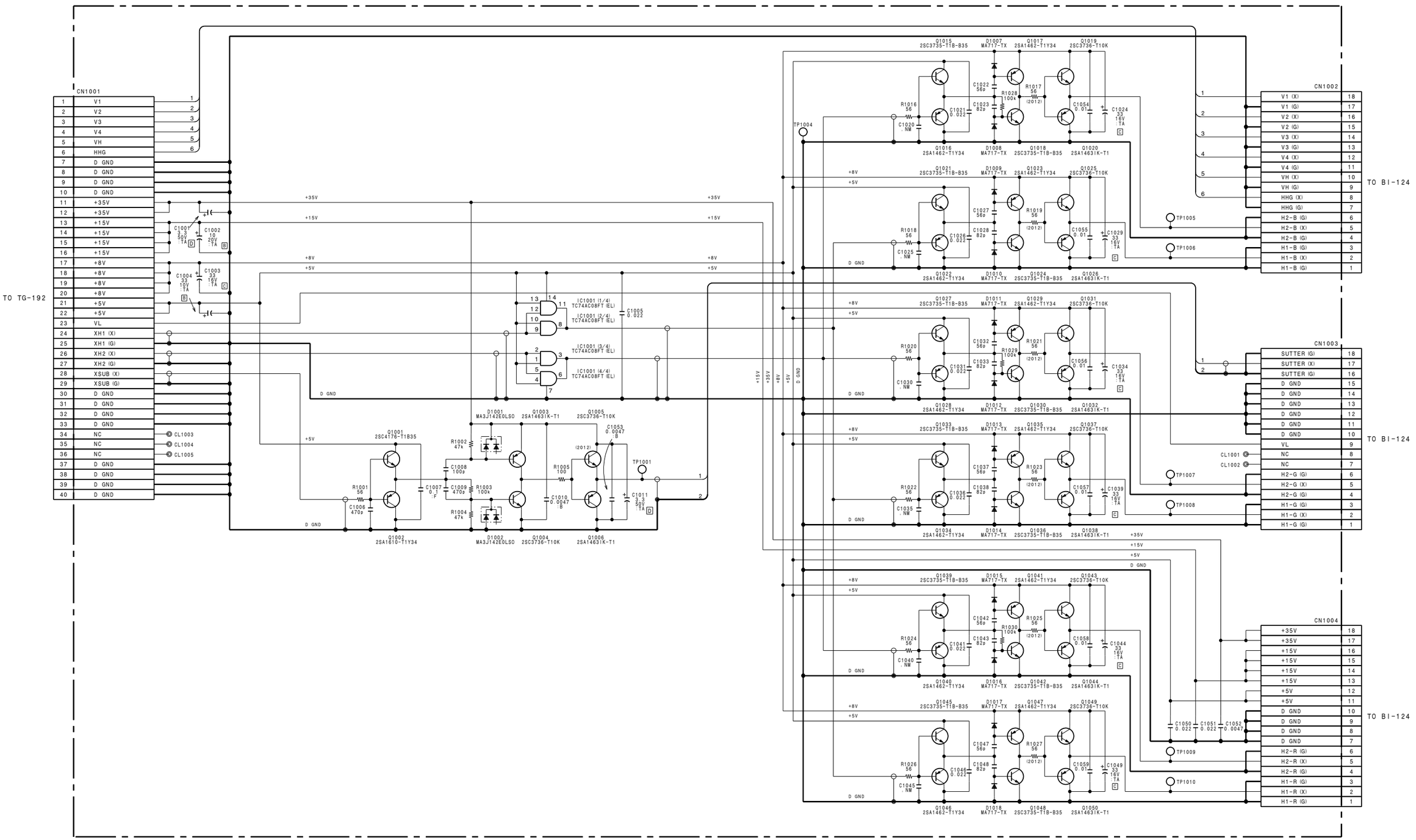
*:B SIDE

CN1201	A3
CN1202	B3
CN1203	B1
D1201	B1
D1202	B1
D1203	A3
D1204	A2
D1205	A1
D1206	B3
FL1206	B2
FL1207	B1
FL1208	B1
FL1209	*B2
FL1210	*B1
FL1211	*B1
F1201	A2
F1202	A2
IC1201	C1
L1202	B3
L1203	A3
L1204	A1
L1205	A1
L1206	A3
L1207	A3
Q1201	B1
Q1203	B3
Q1204	A3
Q1205	A2
Q1206	A3
Q1207	B2
Q1208	A2
Q1209	A3
S1201	*B1
S1202	*B1
S1203	*C1
S1204	*C1
S1205	*C1
S1206	*C1
S1207	*C1

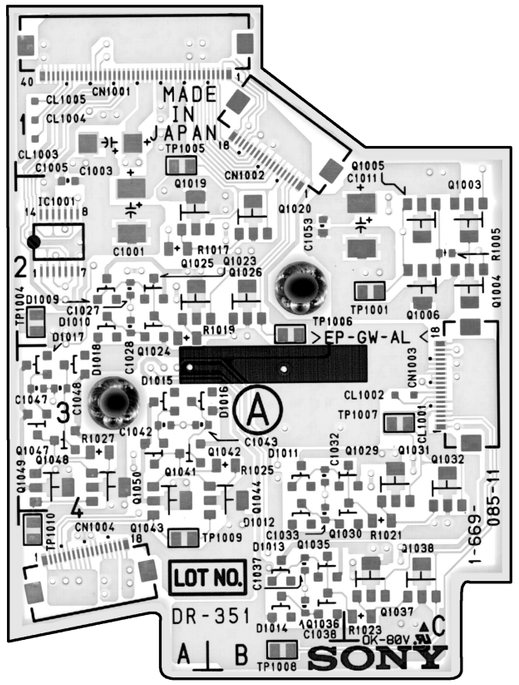
CN-1494 -A SIDE-
1-669-090-11



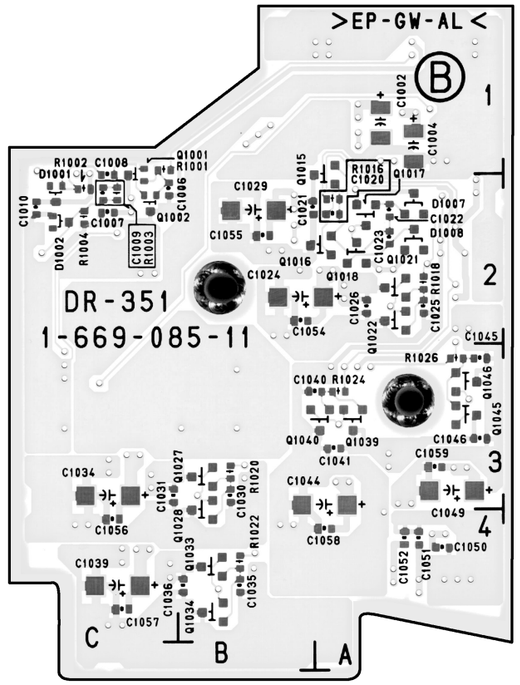
CN-1494 -B SIDE-
1-669-090-11


CN1001
1 V1
2 V2
3 V3
4 V4
5 VH
6 HHG
7 D GND
8 D GND
9 D GND
10 D GND
11 +35V
12 +35V
13 +15V
14 +15V
15 +15V
16 +15V
17 +8V
18 +8V
19 +8V
20 +8V
21 +5V
22 +5V
23 VL
24 XH1 (X)
25 XH1 (G)
26 XH2 (X)
27 XH2 (G)
28 XSUB (X)
29 XSUB (G)
30 D GND
31 D GND
32 D GND
33 D GND
34 NC
35 NC
36 NC
37 D GND
38 D GND
39 D GND
40 D GND
TO TG-192
CL1003
CL1004
CL1005
C1001 3.3 50V :TA
C1002 10 20V :TA
C1003 33 16V :TA
C1004 33 10V :TA
+35V
+15V
+8V
+5V
D GND
IC1001 (1/4) TC74AC08FT (EL)
IC1001 (2/4) TC74AC08FT (EL)
IC1001 (3/4) TC74AC08FT (EL)
IC1001 (4/4) TC74AC08FT (EL)
C1005 0.022
Q1001 2SC4176-T1B35
Q1002 2SA1610-T1Y34
D1001 MA3J142E0LSO
Q1003 2SA1463K-T1
Q1004 2SC3736-T10K
Q1005 2SC3736-T10K
Q1006 2SA1463K-T1
R1001 56
R1002 47k
R1003 100k
R1004 47k
R1005 100
C1006 470p
C1007 0.1
C1008 100p
C1009 470p
C1010 0.0047 B
C1011 3.3 50V :TA
C1053 0.0047 B
TP1001
Q1015 2SC3735-T1B-B35
D1007 MA717-TX
Q1017 2SA1462-T1Y34
Q1019 2SC3736-T10K
Q1016 2SA1462-T1Y34
D1008 MA717-TX
Q1018 2SC3735-T1B-B35
Q1020 2SA1463K-T1
R1016 56
R1017 56 (2012)
R1028 100k
C1020 NM
C1021 0.022
C1022 56p
C1023 82p
C1024 33 16V :TA
C1054 0.01
TP1004
Q1021 2SC3735-T1B-B35
D1009 MA717-TX
Q1023 2SA1462-T1Y34
Q1025 2SC3736-T10K
Q1022 2SA1462-T1Y34
D1010 MA717-TX
Q1024 2SC3735-T1B-B35
Q1026 2SA1463K-T1
R1018 56
R1019 56 (2012)
C1025 NM
C1026 0.022
C1027 56p
C1028 82p
C1029 33 16V :TA
C1055 0.01
TP1005
TP1006
Q1027 2SC3735-T1B-B35
D1011 MA717-TX
Q1029 2SA1462-T1Y34
Q1031 2SC3736-T10K
Q1028 2SA1462-T1Y34
D1012 MA717-TX
Q1030 2SC3735-T1B-B35
Q1032 2SA1463K-T1
R1020 56
R1021 56 (2012)
C1030 NM
C1031 0.022
C1032 56p
C1033 82p
C1034 33 16V :TA
C1056 0.01
Q1033 2SC3735-T1B-B35
D1013 MA717-TX
Q1035 2SA1462-T1Y34
Q1037 2SC3736-T10K
Q1034 2SA1462-T1Y34
D1014 MA717-TX
Q1036 2SC3735-T1B-B35
Q1038 2SA1463K-T1
R1022 56
R1023 56 (2012)
C1035 NM
C1036 0.022
C1037 56p
C1038 82p
C1039 33 16V :TA
C1057 0.01
TP1007
TP1008
Q1039 2SC3735-T1B-B35
D1015 MA717-TX
Q1041 2SA1462-T1Y34
Q1043 2SC3736-T10K
Q1040 2SA1462-T1Y34
D1016 MA717-TX
Q1042 2SC3735-T1B-B35
Q1044 2SA1463K-T1
R1024 56
R1025 56 (2012)
C1040 NM
C1041 0.022
C1042 56p
C1043 82p
C1044 33 16V :TA
C1058 0.01
Q1045 2SC3735-T1B-B35
D1017 MA717-TX
Q1047 2SA1462-T1Y34
Q1049 2SC3736-T10K
Q1046 2SA1462-T1Y34
D1018 MA717-TX
Q1048 2SC3735-T1B-B35
Q1050 2SA1463K-T1
R1026 56
R1027 56 (2012)
C1045 NM
C1046 0.022
C1047 56p
C1048 82p
C1049 33 16V :TA
C1059 0.01
TP1009
TP1010
C1050 0.022
C1051 0.022
C1052 0.0047
CN1002
V1 (X) 18
V1 (G) 17
V2 (X) 16
V2 (G) 15
V3 (X) 14
V3 (G) 13
V4 (X) 12
V4 (G) 11
VH (X) 10
VH (G) 9
HHG (X) 8
HHG (G) 7
H2-B (G) 6
H2-B (X) 5
H2-B (G) 4
H1-B (X) 3
H1-B (G) 2
H1-B (G) 1
TO BI-124
CN1003
SUTTER (G) 18
SUTTER (X) 17
SUTTER (G) 16
D GND 15
D GND 14
D GND 13
D GND 12
D GND 11
D GND 10
VL 9
NC 8
NC 7
H2-G (G) 6
H2-G (X) 5
H2-G (G) 4
H1-G (G) 3
H1-G (X) 2
H1-G (G) 1
TO BI-124
CN1004
+35V 18
+35V 17
+15V 16
+15V 15
+15V 14
+15V 13
+5V 12
+5V 11
D GND 10
D GND 9
D GND 8
D GND 7
H2-R (G) 6
H2-R (X) 5
H2-R (G) 4
H1-R (G) 3
H1-R (X) 2
H1-R (G) 1
TO BI-124

DR-351



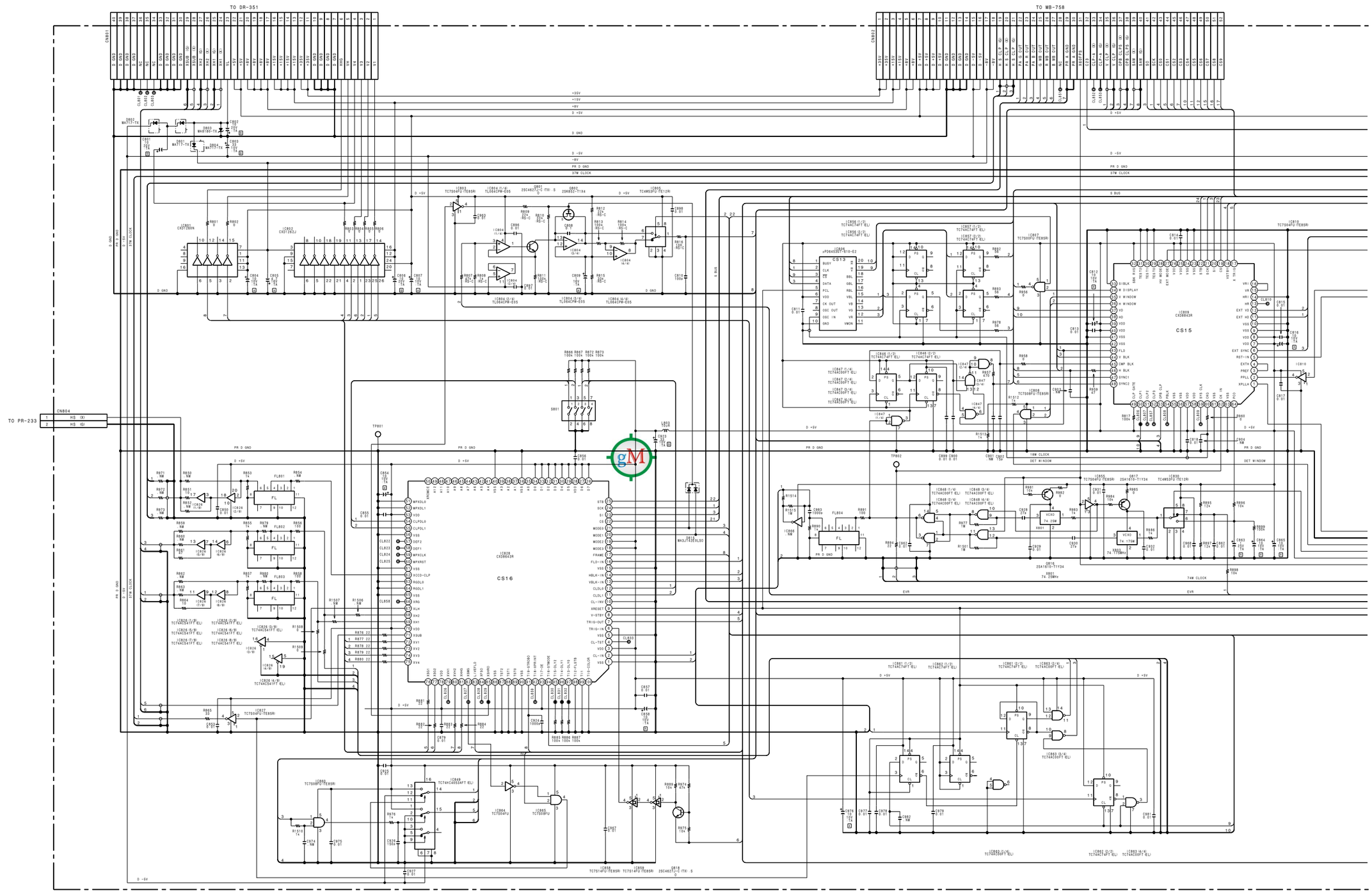
DR-351 **-A SIDE-**
1-669-085-11

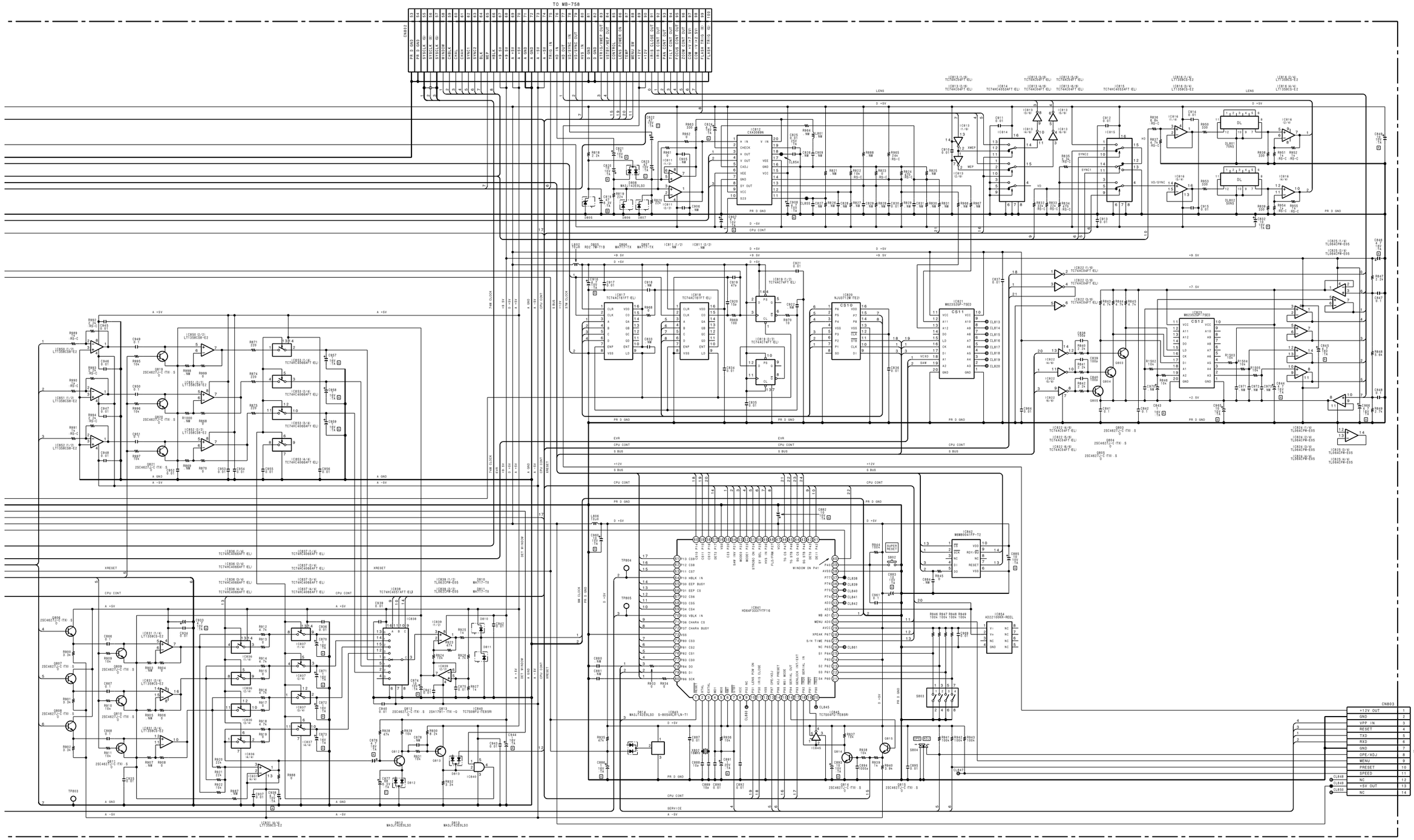


DR-351 **-B SIDE-**
1-669-085-11

*:B SIDE

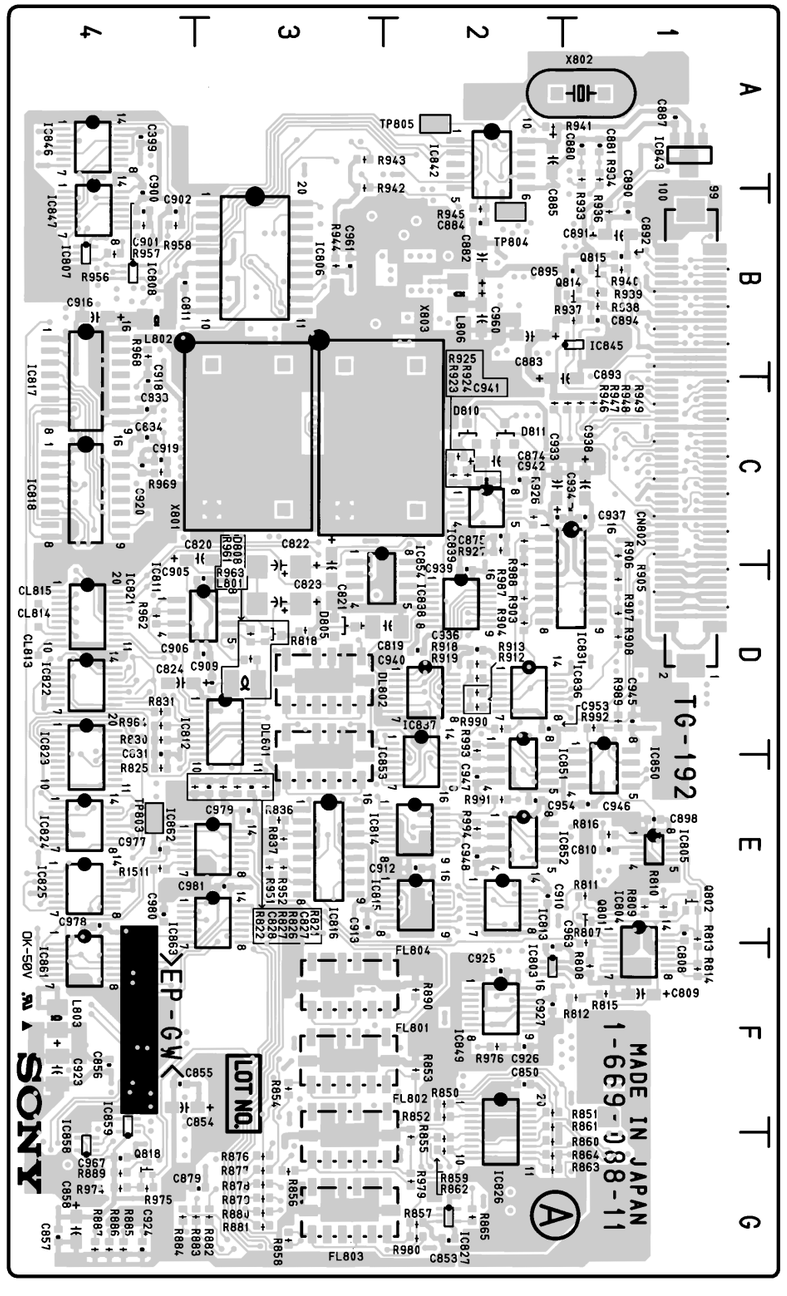
CN1001	A1	Q1036	B4
CN1002	B1	Q1037	C4
CN1003	C3	Q1038	C4
CN1004	A4	Q1039	*A3
		Q1040	*A3
D1001	*C2	Q1041	A3
D1002	*C2	Q1042	A3
D1007	*A2	Q1043	A3
D1008	*A2	Q1044	B3
D1009	A2	Q1045	*A3
D1010	A2	Q1046	*A3
D1011	B3	Q1047	A3
D1012	B4	Q1048	A3
D1013	B4	Q1049	A3
D1014	B4	Q1050	A3
D1015	A3		
D1016	A3	TP1001	C2
D1017	A3	TP1004	A2
D1018	A3	TP1005	A1
		TP1006	B2
IC1001	A2	TP1007	C3
		TP1008	B4
Q1001	*C1	TP1009	A4
Q1002	*C2	TP1010	A4
Q1003	C2		
Q1004	C2		
Q1005	C2		
Q1006	C2		
Q1015	*A1		
Q1016	*A2		
Q1017	*A2		
Q1018	*A2		
Q1019	A2		
Q1020	B2		
Q1021	*A2		
Q1022	*A2		
Q1023	A2		
Q1024	A2		
Q1025	A2		
Q1026	B2		
Q1027	*B3		
Q1028	*B3		
Q1029	C3		
Q1030	C4		
Q1031	C3		
Q1032	C3		
Q1033	*B4		
Q1034	*B4		
Q1035	B4		


TO DR-351
TO MB-758
TO PR-233
CN804
HS (X)
HS (G)
CS15
CS16
CS13
gM

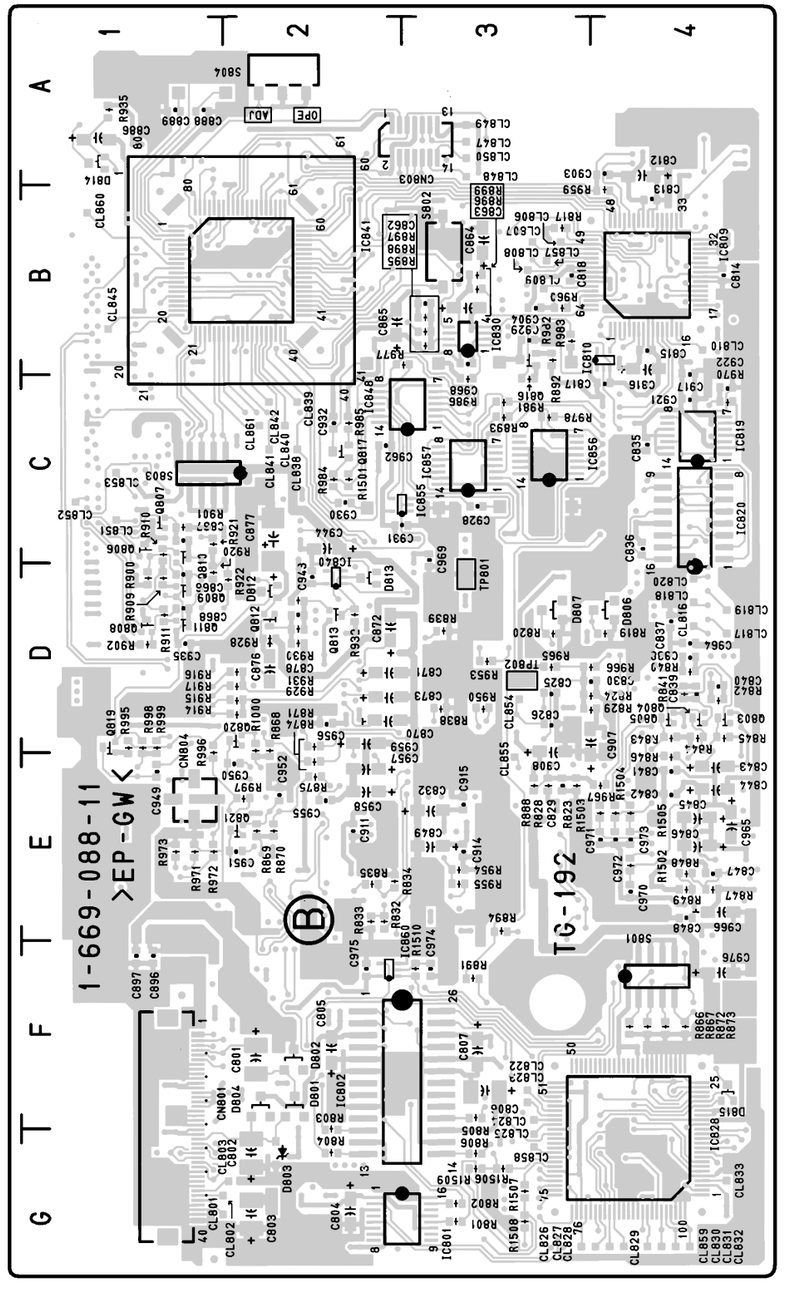

TO MB-758
CNB03
+12V OUT
GND
VPP IN
RESET
TXD
RXD
GND
OPE/ADJ
MENU
PRESET
SPEED
NC
+5V OUT
NC
SERVICE CONNECTOR
LENS
WINDOW ON PAT
PR D GND
CPU CONT
S BUS
SERVICE

*:B SIDE

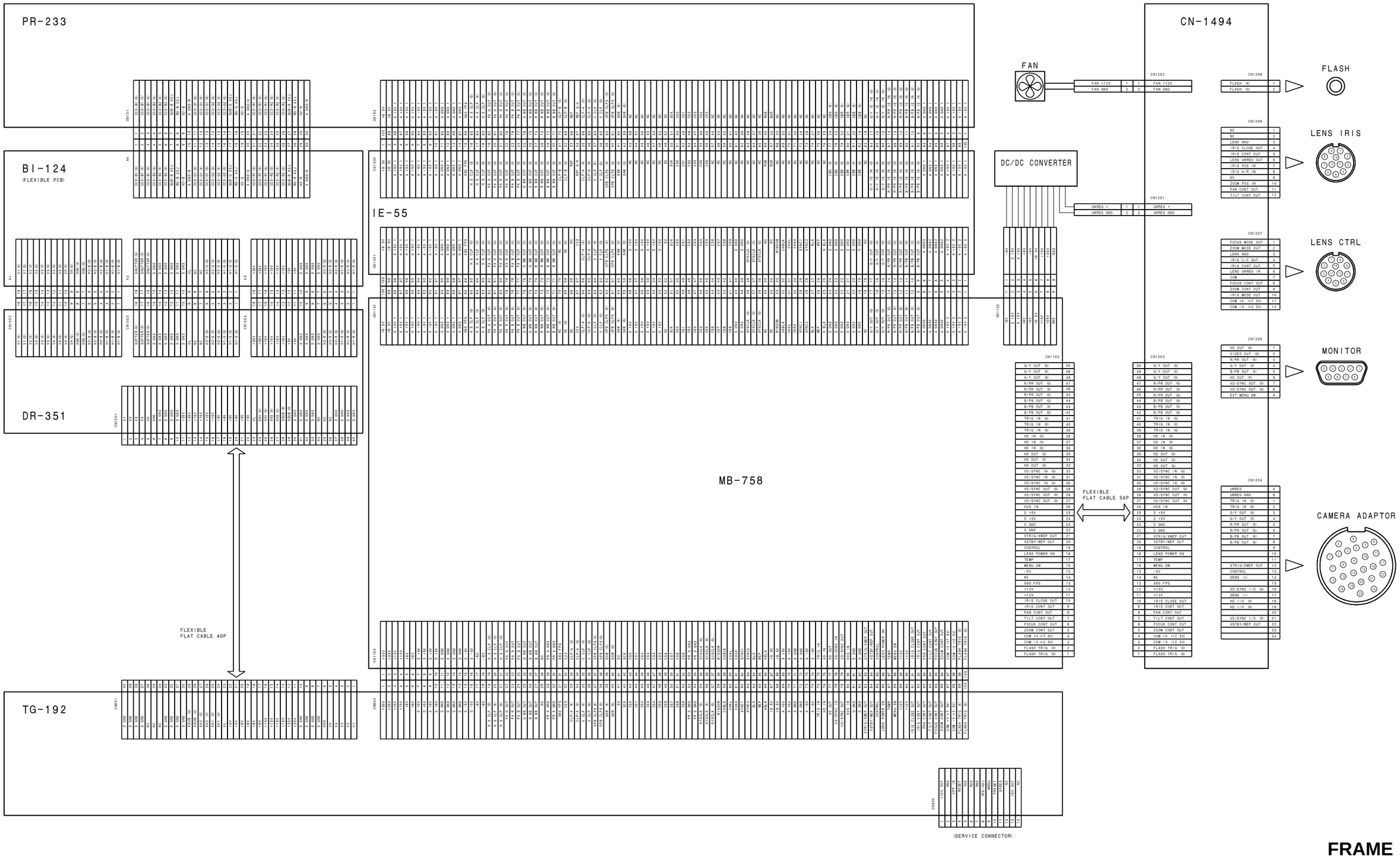
CN801	*F1	Q801	E1
CN802	C1	Q802	E1
CN803	*A3	Q803	*D4
		Q804	*D4
DL801	E3	Q805	*D4
DL802	D3	Q806	*C1
		Q807	*C1
D801	*F2	Q808	*D1
D802	*F2	Q809	*D1
D803	*G2	Q810	*C1
D804	*F2	Q811	*D1
D805	D3	Q812	*D2
D806	*D4	Q813	*D2
D807	*D3	Q814	B1
D808	D3	Q815	B1
D810	C2	Q816	*B3
D811	C2	Q817	*C2
D812	*D2	Q818	G4
D813	*D2	Q819	*D1
D814	*A1	Q820	*D2
D815	*F4	Q821	*E2
FL801	F3	S801	*F4
FL802	G3	S802	*B3
FL803	G3	S803	*C1
FL804	F3	S804	*A2
IC801	*G2	TP801	*D3
IC802	*F2	TP802	*D3
IC803	F2	TP803	E4
IC804	F1	TP804	B2
IC805	E1	TP805	A2
IC806	B3		
IC807	B4	X801	B3
IC808	B4	X802	A2
IC809	*B4	X803	B3
IC810	*B4		
IC811	D3		
IC812	D3		
IC813	E2		
IC814	E2		
IC815	E2		
IC816	E3		
IC817	C4		
IC818	C4		
IC819	*C4		
IC820	*C4		
IC821	D4		
IC822	D4		
IC823	E4		
IC824	E4		
IC825	E4		
IC826	F2		
IC827	G2		
IC828	*G4		
IC830	*B3		
IC831	D1		
IC836	D2		
IC837	D2		
IC838	D2		
IC839	C2		
IC840	*D2		
IC841	*B2		
IC842	A2		
IC843	A1		
IC845	B1		
IC846	A4		
IC847	B4		
IC848	*C3		
IC849	F2		
IC850	E1		
IC851	E2		
IC852	E2		
IC853	E2		
IC854	D3		
IC855	*C2		
IC856	*C3		
IC857	*C3		
IC858	G4		
IC859	F4		
L802	B4		
L803	F4		
L806	B2		



TG-192 -A SIDE-
1-669-088-11



TG-192 -B SIDE-
1-669-088-11


PR-233
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MB-758
DR-351
TG-192
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